


1987

An Introduction to Reading Comprehension Through Exercise for Intermediate English as a Second Language and English for Foreign Language Students

Natalie Barbera
SIT Graduate Institute

Follow this and additional works at: https://digitalcollections.sit.edu/ipp_collection

 Part of the [Bilingual, Multilingual, and Multicultural Education Commons](#), [Curriculum and Instruction Commons](#), and the [Teacher Education and Professional Development Commons](#)

Recommended Citation

Barbera, Natalie, "An Introduction to Reading Comprehension Through Exercise for Intermediate English as a Second Language and English for Foreign Language Students" (1987). *MA TESOL Collection*. 652.
https://digitalcollections.sit.edu/ipp_collection/652

This Thesis is brought to you for free and open access by the SIT Graduate Institute at SIT Digital Collections. It has been accepted for inclusion in MA TESOL Collection by an authorized administrator of SIT Digital Collections. For more information, please contact digitalcollections@sit.edu.

**AN INTRODUCTION TO READING COMPREHENSION
THROUGH EXERCISES FOR
INTERMEDIATE ENGLISH AS A SECOND LANGUAGE
AND ENGLISH AS A FOREIGN LANGUAGE STUDENTS**

Natalie Barbera

Submitted in partial fulfillment of
the requirements for the Master of
Arts in Teaching degree at the School
for International Training, Brattleboro,
Vermont.

July, 1987

This project by Natalie Barbera is accepted in
its present form.

DATE: October 6, 1987

PROJECT ADVISOR: Wliane Larsen-Treeman

PROJECT READER: Eleanor Boone

For English as a Second Language/English as a Foreign Language (ESL/EFL) students, understanding what is read is a complex and often difficult task. This project presents a teacher's guide to exercises for intermediate young adult second language learners to acquire skills helpful in reading comprehension. After an overview of the philosophical and theoretical principles underlying the material, exercises are presented in four sections. Most of the texts for the exercises have been selected from periodicals, since they are a good source for reading material on themes which could be of interest to students.

Exercises in Part I concentrate on how to approach a text by using key visual elements and extralinguistic clues. The exercises require students to delve into their own knowledge to hypothesize about content.

Contextual guessing is the focus of Part II, which presents sentence structure, punctuation and connectives as comprehension aids.

Part III explores dictionary use. Beginning with an exploration of the dictionary and dictionary entries, students move on to practice choosing correct definitions from context clues.

Integrating the previous three sections, Part IV gives the student practice in exploiting visual elements, first and last paragraphs and topic sentences.

The exercises are presented with instructions for teachers and students and focus principally on global--not detailed --reading.

ERIC Descriptors:

Reading Strategies

Reading Comprehension

Second Language Instruction

Second Language Learning

Reading Skills

Directed Reading Activity

English (Second Language)

CONTENTS

PREFACE	i
 I. INTRODUCTION	
A Clarification About Reading	1
The Theory Behind the Material	2
From Theory to Practice	10
Presentation	14
Objectives	18
 II. EXERCISES	
A Few Preliminary Words: Cognates, Scanning and Skimming	19
Student Exercises:	
Part I. Approaching a Text	22
Part II. The Importance of Guessing	50
Part III. Dictionary Work	84
Part IV. Putting It Together	96
 BIBLIOGRAPHY	136

PREFACE: THE NEED

Over the past six years of teaching EFL abroad, I have been struck by the need for increased reading comprehension skills in students at secondary and college levels. Students need to or would like to consult reading materials in English, but often they are not able to get much out of the experience because of their poor comprehension skills. Their interests might range from wanting to understand the lyrics of a popular rock song to the need to read material for course work in their studies. In most of the instances that I observed, students did not know where to begin; very few had had reading instruction that offered them any clue as to how to approach a text they were interested in, and at times they had poor reading skills in their own language.

Being able to understand written English, although a necessary skill, had been side-stepped in many courses where the emphasis is almost entirely on speaking and understanding English. And, unfortunately, in general courses reading was often dealt with superficially in curriculum planning and implementation.

The need for quality in-class reading material and didactic guides for reading comprehension has become evident to me by the glaring lack of their availability. Considering the

need--often foreigners will have more need or desire to read texts in English than they will have opportunities to converse in English--it is obvious that more quality material ought to be developed. It is one of my objectives to contribute toward filling an existing gap in the educational material that is now available for EFL/ESL teachers in the area of reading comprehension.

The process of understanding what we read is a long and complicated one that starts at an early age, and teaching reading skills is undeniably a difficult task. Hopefully, this material will be of value as a theoretical and practical guide for teachers. More than anything, I hope this material will clarify some doubts in teachers' minds and thereby make their teaching of reading more cogent and effective.

SECTION I
INTRODUCTION

A Clarification About Reading

To understand what is meant by "reading" and "reading comprehension" is not simple, for in addition to numerous and conflicting definitions of the terms, recent scientific study of reading has lead to new insights as well as to unanswered questions.

Paraphrasing a dictionary definition, "read" means to take in a sense of something by interpreting the characters with which the language is expressed. But here it must be asked what is meant by "characters." Do we read individual letters, words or sentences, and how do we understand what we read? The more one studies reading and observes the way fluent readers read, the more one realizes that reading does not mean decoding letters, nor is it understanding individual words. And according to some experts, it is certainly not learning to vocalize the words seen on a page. As the definition of reading implies, understanding--grasping ideas--is what reading is all about.

Research done by F. Smith (1971) indicates that because of the way our brains work in fluent reading, it is impossible to get meaning from individual letters or even individual words. The speed at which we read would be slowed down to about sixty words per minute if that were how we read. To get

meaning out of a text, we have to read with some speed and "in chunks," that is, in fairly good-sized sections of sentences. If we are very skilled readers, we take in, at a glance, whole sentences, whole paragraphs or even larger sections at one time in order for our brains to process the information. Reading word-by-word actually impedes the brain from absorbing and making sense of the visual information it is receiving. This can be seen when, after a subject has read something out loud, he or she is able to recall only a little of what was read. The reader was probably concentrating on the individual words or on performance and the content of the sentences simply did not register.

Many of the insights I gained from the research on reading are reflected in this paper and the exercises presented here. Clearly, how we read needs to influence teaching styles, approaches to texts and testing procedures more directly if teachers are to be effective.

The Theory Behind the Material

The exercises presented here follow two important tenets. The first draws upon the fact that reading is not accomplished by reading each word individually. This is the fundamental reason I discourage the habit of approaching reading comprehension by translating texts word-for-word.

We have all seen what happens when language students try to understand an English text by figuring out each word in a sentence. It ends up making no sense whatsoever--if students finish the task at all. They usually get discouraged before they finish a paragraph. Again, it becomes clearer that the meaning of a sentence is not the sum total of the meanings of the individual words.

The second tenet upon which the exercises are based is that our brains, not the words on the printed page, bring meaning to a text. Much recent investigation into reading points to the fact that, to a great extent, our prior knowledge of the world contributes more to reading than do the visual symbols on the page. (Carrell, Goodman, Smith). What does this mean? Let us take an example. Say, the first time we watched a football game without knowing anything about the game. It was totally confusing and boring because we did not know the first thing about football. But if someone explained the game's rules and objectives, then suddenly watching it made sense and even became interesting. The more we know about something, the easier it is to understand more about it. I remember having experienced this phenomenon while looking for a certain street exit on an unfamiliar freeway. I could read the exit sign at a distance much more quickly and accurately than I would have been able to read a random word at the same distance.

To increase reading comprehension teachers need to help students get and use as much information as possible from outside the text. Hence, we arrive at our definition of comprehension as bridging the gap between the known and the unknown. In other words, comprehension is the act of using background information to create new knowledge. According to Adams and Bruce (1980), without prior knowledge a text is not just difficult to interpret, it is meaningless.

The schema theory in reading holds that a reader constructs the meaning of any text in great part from his or her own previously acquired knowledge. That is, the background knowledge (referred to as schema) interacts with the new input from the printed page in the reader's mind, allowing the new information to be deciphered and thereby made comprehensible. Carrell (1983, 1984) and Hudson (1982) conclude that the reader who doesn't use his or her schema, or does not use it appropriately will have more difficulty reading. According to schema theory, a skilled reader is directed by a text how best to utilize his or her schemata to optimize understanding.

Along similar lines, research in reading has pointed to two ways a reader processes information. The reader who takes visual clues from pictures, maps or graphs, etc., is said to be using "top-down" data processing. In other words, the student reads to confirm the predictions he/she has made from

visual clues combined with his/her knowledge of the world. This process is explained as being conceptually driven. During "bottom-up" processing, the reader uses incoming data from lexical clues to construct meaning. This kind of information processing is referred to as being "data-driven."

The top-down process involves tapping internalized knowledge or background knowledge. Background knowledge can signify a lot of things for fluent readers. It is as much knowledge of the language itself as it is some familiarity with the subject matter.

Two essentials of reading comprehension (it is meaningless to translate word-by-word; the reader's own knowledge is crucial to understanding what is written on the page) provide the foundation upon which the materials presented here are built.

How can teachers lead a student toward understanding what is written on a page? Fortunately, recent research on reading comprehension has isolated numerous ways in which successful readers comprehend. Some things would appear difficult to teach: for instance, according to Wildman and Kling (1979), skilled readers seem to somehow "know" where to make eye fixations on a page to optimize understanding. But other steps fluent readers go through seem possible to teach to

learners and less successful readers. At the very least, teachers can help students become more aware of what skilled readers do that enables them to succeed. For example, research by S. C. Smith (1982), Ilyin and Targardh (1978), and Van Parreren and Schouten-Van Parreren (1981) indicates that good readers tend to read the introduction and conclusion of a text. They might do this for a number of reasons: to make predictions about the text, to see the author's style and/or point of view, to see whether the text is of value to them, and to know how they should read the text--e.g., whether they should read it carefully or not.

According to Hosenfeld, et al (1981), effective readers usually follow certain "rules," although perhaps not always in the order indicated here: 1) They expect that the text is going to make sense. 2) They use their knowledge of the world. 3) They read the title and make inferences. 4) They use illustrations. 5) They read to identify meaning rather than words. 6) They keep the meaning in mind. 7) They take chances to identify meaning. 8) They skip unnecessary unknown words and guess contextually. 9) They use a variety of context clues. 10) They use context in preceding and succeeding sentences and paragraphs. 11) They can recognize cognates. 12) They analyze important unknown words. 13) They identify the grammatical category of words. 14) They evaluate their guess to determine its correctness and go through the steps

again if their guess proves incorrect. (Van Parreren and Schouten-Van Parreren, 1981). 15) They continue even if they are unsuccessful at times. 16) They use a side-gloss if there is one. 17) They use a glossary as a last resort. 18) They look up words correctly. 19) They follow through with their proposed objectives.

Teachers can use their knowledge of how good readers go about reading to help guide their teaching methods and students. It should be remembered that skilled readers use a variety of skills at different difficult points in a text, so it is important that readers be familiar with and flexible enough to try different "plans of attack" if they seem to be making little progress.

As indicated in point 14, skilled readers test their hypotheses against the text to check for miscalculation. Van Parreren and Schouten-Van Parreren (1981) give an informative and detailed analysis of the results of a reading comprehension study in which their subjects were shown to be acting on different hierarchically organized linguistic levels when they had comprehension difficulties. These levels were described as syntactic when the subjects thought about the grammatical structure of a sentence; semantic when they explored the "immediate or wider context of the unknown word...to finds its (global) meaning"; lexical when they inspected the word form

to derive its meaning and, finally, stylistic when they tried to "appreciate the exact, stylistic usage of a word."

The authors' analysis of the readers' errors gives us a tremendous amount of information about where readers go wrong in the comprehension process. According to Van Parreren and Schouten-Van Parreren (1978), syntactic level errors were usually made for the following reasons: Readers 1) did not act on this level, but instead acted on a "higher" level, e.g., a semantic or lexical level, 2) added some elements needed for "their" interpretation of the passage, 3) misread words and distorted the context in a way that suited their premature guesses.

Errors made on the semantic level usually occurred when readers, 1) did not check their hypotheses within the context of the text (often resulting in a total misconception of the text) and 2) failed to verify their hypotheses with their knowledge of the world.

Lexical level errors occurred when readers, 1) omitted the preceding levels (syntactic or semantic, or both), 2) did not verify their hypotheses on a lexical level, 3) acted on the three levels (syntactic, semantic and lexical), but not in the right order, 4) failed to check their hypotheses with the context and their knowledge of the world, 5) did not compare

the different contexts of the same word when they occurred repeatedly within a text.

Most errors on a stylistic level occurred due to mother tongue interference, but were relatively unimportant when the subjects were reading for comprehension only.

The authors emphasize that it is very important that students be aware of the levels on which they can operate to make decisions and that student discussion of the ways in which they deal with comprehension problems can prove to be fruitful. Of course, teachers who are aware of the ways skilled readers confront a text can more easily encourage the formation of these specific techniques in learners and less skilled readers.

In contrast to the difficulties in reading, there is an inherent factor in nearly all texts that can ease students' comprehension tremendously. That factor is redundancy. Communication is redundant. The same things are said over and over by means of examples, clarifications, parenthetical statements, graphs, et cetera, and this redundancy can be used to students' advantage if they know how to go about it. Teachers should emphasize that if a reader cannot understand a word in one place, its meaning will usually become apparent somewhere else in the text. A word or a few words usually are

not critical to the meaning of a text, and there are often punctuation clues to alert the readers, as when a word or concept is defined or reiterated. This is of great value for students to know and it is important that they realize that it is quite all right to skip words--that it is even common for native speakers to do so. What is important is to know when a word can be skipped. These concepts will be explored in several of the exercises presented.

From Theory to Practice

Now that some of the reading theory has been explored upon which the exercises here are based, there still exists the persistent problem of how to go about teaching reading comprehension. But before I can continue with what goes on in the classroom, I would like to concentrate briefly on how things should occur.

The materials and methods presented here are based on a faith in humanistic teaching. I am convinced that the best teaching goes on in an environment where there is trust, in students and in teachers, where student-initiated topics and projects are encouraged, where the atmosphere is as non-threatening as possible and where learning is as meaningful as possible.

These convictions have solidified over years of teaching experience. The classroom must be a place of creative experimentation that facilitates change and unleashes the potential for discovery that everyone has inside. This can only be done where students feel secure enough to risk failure in order to reach success. According to Rogers (1969), self-initiated, student-centered learning seems to be the most lasting. Consequently, classroom activities should allow for this kind of learning.

Another crucial element in learning is that students must believe that what they are doing is relevant. In order for learning to be relevant, students must participate. They must participate not simply by raising their hands or asking and answering questions, but through an active involvement in the process of learning from beginning (topic and material selection, goal and activity planning) to end (participation in student-directed projects and even in their own evaluations). Significant learning appears to take place through doing, and to get students to do things, they must be motivated and enthusiastic about what they are doing. They have to feel that what they are learning is important to them and that they are not just receiving what others think matters to them. When students discover that they can participate in their own education, they cease being passive receptors. At last they have an investment in their own educational fate. I encourage

teachers to read and learn about the experiences and concrete results other teachers have had in open-type classrooms, and to explore the potential for open classrooms as far as teaching and learning is concerned.

My beliefs in a humanistic pedagogy have implications in the materials presented here. In order for students to become involved in learning to understand what they read, they must feel that reading comprehension is their learning task and not simply the teachers' teaching assignment. This means that students need to decide what they want to learn: song lyrics, magazine articles, poetry, or even how to put together a Nautilus exercise machine. They should have easy classroom access to a large selection of reading material that they have selected. (On the first days of class students can discuss what sorts of things they would like to or need to read.) Students will need teacher guidance for strategies that would be appropriate to facilitate comprehension, but the texts can be varied and students can work individually or in groups to complete the exercises. Specific characteristics can be pointed out as criteria for students to look for in selecting texts. Initially, I would suggest texts that are limited to one or two pages at most, as longer texts soon appear to be without end to the student and are ultimately self-defeating. Research (Laufer-Dvorkin, 1981) suggests that students study-

ing shorter texts improve their comprehension significantly more than students using longer texts.

The activities and texts presented here are samples of exercises that might be done in the classroom. Due to students' diverse interests and needs and the rapid changes in topics of interest (last year's articles on Michael Jackson and Madonna seem terribly passe to students this year), it is imperative that texts change as current events change. Fortunately, students are rarely at a loss for themes or topics with which they are fascinated. Here teachers must use discretion in guiding students to texts that are not overly difficult for their level. A text is difficult in relation to what information the reader is asked to obtain from it. A difficult text need not be read for detailed information. Rather, teachers can exploit aspects of the text such as the format, illustrations, title, introductory and concluding paragraphs or topic sentences.

As has been said earlier, one essential element of a reading comprehension class is that students be surrounded by English reading material on a variety of subjects. Whether students are interested in simply leafing through some books or magazines, or in pondering the lyrics of rock songs, it is probable that they are practicing some strategies they learned

about in class or perhaps have learned along the way in their first language and are employing unconsciously.

Another crucial factor is making sure students feel at ease and unthreatened. Frank Smith (1978) points out that a most effective way to produce incomprehensibility in reading is to make the reader apprehensive about making a mistake. Too often a classroom atmosphere is precisely contrary to the educational goals to which it should be conducive. In agreement with this thesis is Krashen (1983), who speaks of the students' need to reduce their affective filter, and Rogers (1969), who refers to the need for an unthreatening environment and mutual trust. Given the normal situation in an educational institution, it is difficult to transform the often present tension and anxiety into a productive, participatory learning atmosphere. Nonetheless, we should not lose sight of this goal as a key element toward tipping the educational balance in favor of the students and the teacher.

Presentation

The material presented here is suggested for intermediate students who have a basic knowledge of English. The exercises concentrate almost exclusively on global reading, that is reading for general and not for detailed understanding. The exer-

cises use scanning and skimming larger-than-word-or sentence units to get an overall impression of the text and exploit extralinguistic information for clues to make hypotheses on content. The readings are relatively short, unedited texts, from magazines or newspapers, with as little of their original format altered as possible. They focus on a variety of themes in order to appeal to a wide range of readers. (Let it be emphasized here that the texts are samples of what might be used, but that student needs and interests should determine the texts used in a class situation.) Texts from periodicals were chosen, because newspapers and magazines are good places to find texts dealing with the students' interests and needs.

Whereas many ESL/EFL reading materials present texts accompanied only by comprehension questions that students either get right or wrong (the idea being that the fewer mistakes they make, the more they are progressing), the exercises here offer a more systematic method. They present the student and teacher with a framework for how to approach text and how to exploit certain factors in and outside the text, enabling the reader to obtain a maximum amount of information from what is read.

The exercises are divided into four parts which are seen as a sequence of strategies or steps students take toward improving reading comprehension. Each section has an

introduction and explanation for the teacher, followed by sample exercises for the students. The subject of cognates is mentioned to the teacher at the onset of the exercises, since many words in English are transparent to some non-English speakers. When this is the case, cognates can be of great help to students in deciphering titles and understanding the gist of an article. Scanning and skimming are also briefly explained to the teacher.

Part I focuses on first impressions. These are determined by the outstanding elements one sees first in a text. The goal is to help the reader learn to exploit extralinguistic clues such as illustrations, graphs and type face that often provide information that is helpful for comprehension.

Part II is one of the most important group of exercises. It presents the concept of guessing, which is a crucial aspect of reading in both first and second languages. The exercises emphasize the importance of guessing the meaning of unknown words (or skipping them when possible) and trying to use syntactic, semantic and lexical clues to help make accurate guesses about a text as a whole. The student will take a brief excursion into English grammar to become familiar with some basic syntactic patterns: Subject + Verb + Complement, and Adjective-Noun word order. Punctuation and connectives

are also mentioned in this section, and it will be pointed out how they can be of help to the reader in understanding a text.

The dictionary is helpful to the language learner and students should know how to use it correctly. In Part III, some dictionary jargon is explained and exercises give students practice in choosing the right word definition according to syntactic and semantic clues.

According to research by S. C. Smith (1982), skilled readers use the strategy of reading the introductory and concluding paragraphs of a text to help them understand it. Part IV will teach students to combine the information they get from the first and last paragraphs together with other clues to make hypotheses about the general content of texts. In this section, students will also be introduced to reading topic sentences in order to get a more complete idea of the text. This last section serves to integrate the various reading strategies taught in the previous sections.

The texts included in this material are sample articles which will be useful to teachers because 1) they illustrate guidelines by which texts could be chosen for work in class and 2) they could be used in class if they were of interest to students.

Objectives

The exercises presented here are guides or prototypes for the reading comprehension teacher and they give teachers a general plan, as well as some concrete steps to follow, to lead the students along a logical path toward reading comprehension.

Teachers are encouraged to expand upon the exercises if students need more work in one area. The exercises can also be a base from which students can go on to more independent work.

Although specific reading strategies are exploited in the example texts, students should have a certain amount of freedom to choose texts or themes, since student interests do not always correspond to what their teachers imagine them to be.

As teachers and students work together, the classroom can become a place for new thoughts, expansion and change. It would be rewarding if, in addition to this material's being useful in improving students' reading comprehension, it also provided an impetus toward a creative learning environment.

SECTION II
EXERCISES

A Few Preliminary Words

Cognates

Some students whose native language is partially composed of words with Latin and Greek origins will have an advantage in learning to read and understand English because of cognates. Cognates are words that look similar and have equivalent meanings in different languages. For this reason they are sometimes called "transparent words." For example, the word comprehension is similar to words with the same meaning in French, Italian, Spanish and Portuguese because the root for the different versions of the word comes from the Latin Com + prehendere. Other examples of cognates are words like "organization," "different," "nation" and "individual". There are thousands of cognates in English and Romance languages. Similarly, Germanic and cognates from other languages are found in English, although less frequently than those from Romance languages.

Because there are so many cognates, they occur frequently in texts and can be of great help to students in deciphering a text's global meaning. But just as cognates can be a help, teachers must caution the readers to be careful of false cognates--words that look similar, but whose meanings are not similar at all. Unfortunately, there is no easy way to know if a word is a cognate or merely appears to be.

If students can recognize cognates it will obviously be to their advantage. For example, if there are cognates in the title, it will help students to tap their knowledge of the subject, help them to hypothesize about the subject matter, and sometimes even help them to determine the author's tone. Exploiting cognates throughout an article will help confirm or redirect the students' hypotheses. A teacher should guide students to exploit cognates, when possible, from the start.

Scanning and Skimming

In most of the texts presented here, the students are encouraged to read either for specific information or for the general idea of the text. It should be emphasized that the students should not try to read every word individually. Often they will have to try consciously to break the already-formed habit of translating each word. To accomplish this, two forms of reading will be practiced initially: scanning and skimming.

Scanning means reading quickly, the eyes making brush-stroke like movements across the page, to search for predetermined information. With very little practice, the eye becomes trained to zero in on information with remarkable swiftness.

All the readings here should be approached in essentially the same way: by scanning the title, author, illustrations, numbers, names, places, et cetera, for information. To help break the habit of reading individual words, students should be given a limited time frame in which to complete the exercises. The time frames should be short enough to prevent reading every word, yet long enough to allow them to find the information they are looking for.

Skimming is reading to get the general idea of a text. Again, to discourage students from reading individual words, it helps to work within a time limit appropriate for the text being read.

Although in these exercises students should always approach a text by first scanning to locate helpful information and then skimming for the main idea, they will be introduced to more detailed (intensive) reading when they begin to work through the exercises in Part II (The Importance of Guessing).

STUDENT EXERCISES: PART I

APPROACHING A TEXT

Part I: Approaching a Text

Teacher: Texts make sense. We expect that a text as a whole is going to make sense and that the individual elements (clauses, sentences, paragraphs, et cetera) that make up the whole are going to make sense. Based on this fundamental assumption, other important assumptions about texts can be arrived at. Texts are organized logically in order to help the reader get through the material and understand it. The logic is created by the demands of the language, combined with the needs of the author, although the second language reader may not always perceive that logic. For example, an essay in English usually has an introduction, exemplary points and a conclusion. Most paragraphs have topic sentences that introduce the main idea of the paragraph.

The starting place for work in reading comprehension is based on the fact that a text is logical within its own framework and in the larger context of the world. Were this not the case, an article in a magazine or newspaper might look like this:

NEWSLINES

FROM WASHINGTON

WOMEN IN WASHINGTON ARE LOSING GROUND

Women of both political parties claim that the female population is being thoroughly ignored in the second term of this administration. Even staunch Republicans like Jeanne Kirkpatrick, former U.S. Ambassador to the United Nations, have complained about the

men-only atmosphere that prevails in the White House and cabinet departments. "We feel cut off from this administration," says Irma Finn Brosseau, executive director of the nonpartisan National Federation of Business and Professional Women's Clubs, a 140,000 member group. "A year ago, women's groups were very vocal about how they were being ignored, but nothing has changed since then. We've decided to focus on making gains on the local level because there's so little we can do at the national level." Women in Washington, upset about their lack of political influence, point to the



With government cutbacks in social spending in recent years, women's groups across the country have stepped up efforts to start special funds to raise money for women's health clinics, domestic violence centers and job training programs.

The women's fund that raised the most money last year is Women's Way in Philadelphia, which raised \$535,000 for women's services, including a rape hotline and shelters for abused women. Other leading funds include the Chicago Foundation for Women, the Kentucky Fund for Women in Louisville, the Women's Funding Coalition in New York City, the Women's Foundation of Dallas, the Women's Community Fund in Cleveland and The Women's Foundation in San Francisco.

Why are women urged to support funds specifically targeted to women and girls? "Because general charities and foundations don't meet their needs," says Kate McQueen, an assistant director of the national Committee for Responsive Philanthropy, which encourages non-traditional giving. McQueen cites recent studies by the Foundation Center, a monitoring group, which show that only 1 to 4 percent of all charity dollars go to groups that solely benefit women and girls.

Why so little? Partly because men usually control the institutions that give money to charities, says Dyan Oldenburg, director of the Women's Funding Alliance in Seattle, and that affects which charities are selected. United Way, for example, gives YWCAs less than 60 percent of what they give to YMCAs.

To find out more about the women's funds in your area, write to the National Committee for Responsive Philanthropy, 2001 S Street NW, Washington DC 20009.

FUNDS BY WOMEN, FOR WOMEN: WHY THEY MATTER

by Margaret Engel

A reporter for The Washington Post, she is a past winner of a Nieman Journalism Fellowship to Harvard.



March 1986, Glenview

following facts:

- An ad hoc group of Republican congresswomen, formed by Representative Olympia Snowe (R-Maine) and other women in federal offices to press concerns about the lack of representation of women in government, disbanded shortly before the 1984 election.

Republican Kathy Wilson, former chair of the National Women's Political Caucus, says, "During the election season, there were gender gap seminars sponsored for political reasons, but those disappeared."

- As of December, everyone who is attending White House senior staff meetings is male. No woman reports directly to the President. There is only one female cabinet head: Elizabeth Dole, Secretary of Transportation.

- The White House Working Group on Women, a unit set up by former presidential advisor Michael Deaver before the 1984 election to change the perception that women's issues were being ignored, was dismantled last March.

- The administration has gone on record supporting federal aid to colleges that discriminate against women in terms of equal funding for athletic and other programs. In addition, it has announced plans to drop goals and timetables for affirmative action. (A recent report from the National Academy of Science says that by not enforcing these laws and regulations, the administration segregates women into low-paying jobs.)

"In Reagan's first term, we tried to help the White House Personnel Office find women in corporate jobs who might want posts in the government," says Char Mollison, executive director of the Women's Equity Action League (WEAL). "But the names we suggested were vetoed or ignored. All we've done since then is lose more ground."

"Even our traditional friends and allies on Capitol Hill aren't taking our issues seriously. The biggest impact this administration's negative attitude toward women has had is to make it imperative to ignore us."

There are many elements on the previous page that do not correspond to the norms we are used to. Sections are askew, the title is not prominent on the page, parts of the text are not arranged in the "normal fashion." As a result, it is difficult to make sense of the text.

The rules that are followed to give a text cohesion and sense can be exploited by the reader and can help him or her focus on the topic. The objective of the exercises in this section is to help the reader focus on the organizational elements of a text to enhance his or her comprehension.

Exercise 1: Text Organization

Objective: To illustrate the importance of the organizational elements of a text.

Teacher: Students can work individually, in pairs or in small groups. Distribute the scrambled text and worksheet to the students. Review the answers with the class as a whole.

Exercise 1: Text Organization

Students: Look at the text and answer the questions below.

1. What are all the things you find unusual or "wrong" with this text? _____

2. Was it easy or difficult to understand? _____

3. How could you change the text to make it easier to understand?

AMERICA

NOW

OF

CONCERN



To those of us who read every day—who depend on newspapers and magazines for information and entertainment, fill out insurance forms, comparison shop at department stores, look up numbers in the telephone directory, follow recipes, decipher instruction booklets for new appliances, and relax in the shade with a good book—life without the written word is incomprehensible. And yet for as many as 60 million adult Americans—one in three—words are at best a mystery, at worst fearsome and shaming roadblocks.

The numbers are huge and chilling:

- 27 million adult Americans are unable to read
- at least 30 million more are functionally illiterate—they read and write so poorly that they cope only marginally
- in just 15 years the functionally illiterate population could be as much as 70 percent of adults
- every year 2.3 million functionally illiterate people are added to the ranks; some are immigrants who may or may not be literate in languages other than English, and, incredibly, 1 million come out of our public schools.

fully don't pay their share of taxes, can't maintain basic health and nutrition standards, can't understand governmental processes, and can't share civic responsibilities. Research done by Cates' group found that just under 50 percent of all Americans over age 18 are truly proficient and in command of the skills needed to cope in our complex

society. "Those of us in that group," Cates says, "are part of a diminishing body able to carry the burden of this society and contribute to its continuing enrichment."

One reason the problem is growing is that standards are higher today. Cates' research found that most people can read and write, but society has become so sophisticated that those simple abilities are not enough.

Life is limited for the more than 40 million people who are "marginally" literate. They are people, for example, who can read well enough perhaps to fill out a job application, but not well enough to perform their jobs adequately or to accept a promotion. A woman who left school to work after the sixth grade says it simply: "When you can't read too good, there's a lot of things you don't know."

out learning to read. "I behaved class," she says, "and I was grade behavior. No one believed me told them I couldn't read."

More difficult to grasp tragedy and how it affects every one of us. "Traditional disgrace the promise

Cates,

BETTER HOMES AND GARDENS, NOVEMBER 1983

ILLITERACY

THE SHOCKING,
SILENT CRISIS

Total 1985
Adult
Population
in U.S.A.
176 Million

Functionally
Illiterate
Adults
in 1985
60 Million

Predicted
Functionally
Illiterate
Adults
in the
Year 2000
80-100 Million

By Kathryn Stochert

Easy enough to understand is the private tragedy of illiteracy as it affects individual lives. We can sympathize with people like the Connecticut mother who was needed through school with-

Each year as many as 2.3 million people join the ranks of America's functionally illiterate. Some immigrate from other countries; the rest spill from our public schools.

an
d on
when I

is the public
fects each and ev-
ne condition is a na-
and a growing threat to
e of America," says Jim
director of the Adult-Perfor-
ce-Level project at the University
or Texas, which has conducted the only
scientific research on functional litera-
cy in the country. "We are all victims of
illiteracy. We pay the price for it one
way or another," says Cates. We pay
because those who cannot function

Exercise 2: Elements Of A Text

- Objectives:**
1. To familiarize students with the vocabulary of text organization.
 2. To familiarize students with the different parts of a text.

Teacher: Distribute the worksheet and clarify new vocabulary. Distribute the three texts to students individually, in pairs or in small groups. Assist students with their task. Review their results with the class as a whole.

Exercise 2: Elements Of A Text

Students: Study the three articles and locate the appropriate elements in each from the following list. (Not all the elements are present in every article.) Then answer the questions following the list of elements.

1. Name of publication
2. Section
3. Author(s)
4. Date
5. Title
6. Subtitle
7. Lead
8. Captions, pictures, maps, graphs, tables/charts
9. Divisions of text
10. Bold face type
11. Italics

Answer the following questions:

1. Why is a lead helpful?

2. Why are italics used?

3. Are text divisions helpful? Why?

4. When is bold face type used?



PHOTOS BY DIEGO GOLDBERG—SYGMA

Victim of success: Counselors fielding calls at Fair Oaks in New Jersey

Hot Line on the Hot Seat

Is 800-COCAINE a godsend or a sales gimmick?

The number is fully etched by now in the public mind: 800-COCAINE. In the three years of its existence, the nation's best-known drug hot line has counseled well over 1 million callers about how to kick the cocaine habit. But now its very success is igniting a controversy. The chief problem is its dual nature: the hot line aims to render a vital public service, but it is also a marketing tool for its corporate owner, a chain of for-profit health-care facilities. The question is whether the two roles constitute a conflict of interest—and, increasingly, whether the hot line delivers the service that it set out to provide.

When the hot line's founders first conceived it, their motives seemed benign enough. The brainchild of Dr. Mark Gold, a respected if somewhat flamboyant psychiatrist who practices at Fair Oaks Hospital in Summit, N.J., it was set up to offer information, advice and treatment referral to cocaine users, as well as to assist Gold's research into cocaine abuse. The estimated \$250,000-plus annual cost of running the hot line is paid by Fair Oaks, which is owned by Psychiatric Institutes of America (PIA)—a subsidiary of National Medical Enterprises, Inc. (NME), one of the nation's largest health-care-management firms. In recent years PIA has moved steadily into

substance-abuse programs, one of the few growth areas in a declining market for inpatient hospital services. Its facilities enjoy a reputation for excellent care at higher-than-average prices—more than \$20,000 for a 28-day treatment session.

Top prize: NME and PIA make no secret of the fact that 800-COCAINE is a prized possession—and for good reason. Callers to the hot line who ask for referrals are given the names of several nearby doctors or treatment centers among the roughly 4,000 compiled by the hot line and the National Institute on Drug Abuse (NIDA), a federal agency. But the centers named frequently include facilities owned by PIA and NME, such as Fair Oaks in New Jersey, Century City Hospital in Los Angeles or Regent Hospital in New York. Calls from Florida,

meanwhile, bounce directly to a separate branch of the hot line—run by Gold's cousin, Peter, 27—at another center singled out for referrals, PIA's Fair Oaks Hospital in Delray Beach, Fla. In its 1985 annual report, a proud NME listed 800-COCAINE as one of several "innovative outreach programs" that had helped PIA boost occupancy rates at its 50 facilities.

That corporate boast notwithstanding, PIA president Norman Zober insists the hot line isn't "a cheap referral gimmick." He says fewer than 1 percent of all patients entering PIA's substance-abuse programs were referred there by the hot line. In fact, 800-COCAINE may be more valuable as relatively inexpensive "image" advertising—a soft sell rather than a hard sell," as Nathan Kaufman, NME's former director of marketing, puts it. The hot line has drawn praise from the medical community for yielding valuable research on cocaine abuse. Many radio stations across the country willingly run free public-service announcements to advertise it. Zober admits the hot line is so effective that other health-care companies have even offered to buy it.

Concern about the proprietary nature of 800-COCAINE was one reason that NIDA went ahead with plans to set up its own smaller drug hot line, 800-662-HELP. The sponsors of 800-COCAINE "have terrific expertise," says NIDA spokesman Susan Lachter, "but their job is to get people into their programs. NIDA and the government could not be in the position of making 800-COCAINE the only option." Lachter says NIDA wanted to make certain that the poor or inadequately insured—who couldn't afford treatment in PIA facilities—still got good counseling and referral advice. The concern may be well founded: Julio Martinez, director of New York's Division of Substance Abuse Services, complains that the state's own drug hot line (800-522-5353) is swamped with calls from indigents who say they were referred there by 800-COCAINE.

Full disclosure: Unfortunately, both the NIDA and 800-COCAINE hot lines may be victims of their own success. Many callers face long delays in getting through—particularly to 800-COCAINE, where three or four counselors per shift and six phone lines handle up to 2,200 calls a day. Defying reason, both hot lines handle the load in part by referring calls to each other, suggesting that the services probably should be expanded if they want to remain useful. Equally important, say critics like Martinez, is the need for disclosure: 800-COCAINE should make callers aware of its ownership—and identify PIA or NME facilities to which it refers them. Then few could begrudge the hot line or its owners their success in doing well by doing good.

SUSAN DENTZER with PETER MCKILLOP in New York and MARK MILLER in Washington

Respected physician: Hot-line founder Gold (left)



Pass laws being scrapped, but apartheid remains alive

A roll of the political dice by Botha

■ With violence mounting and the white minority deeply divided, President Pieter Botha is fast losing his ability to dictate the pace of racial reform.

Few here now doubt that the old order someday must yield to a different South Africa. Even Botha's April 23 promise to repeal hated apartheid pass laws seems to concede that. The question is whether he can continue to brake the process with a gradual dismantling of apartheid. Based on the evidence, it seems highly doubtful.

Botha, 70, faces deadlock on every side. As he presses for limited reform, such as the pass-law repeal, his white political base shrinks. But as he hesitates, black fury rises and violence mounts in a land where blacks outnumber 5 million whites 5 to 1.

What he now proposes is to scrap many of the laws designed to keep blacks in rural "homelands" and out of white areas. But remaining segregation laws mean apartheid is far from dead. And there is still no official sign that blacks are to be given the vote, or even representation in central government.

It's still possible for authorities to indirectly curb the movement of blacks, which the latest action ostensibly would free, by limiting housing growth for them in urban areas. The new rules do not cover citizens of four "independent" black homelands—Bophuthatswana, Ciskei, Transkei and Venda—6 million blacks in all. As if to underline its resolve to retain control, the government April 22 adopted sweeping powers to deploy security forces in black areas without declaring a state of emergency.

Giving with one hand and taking with the other long has characterized Botha's strategy as he tries to balance blacks' demands and whites' fears. The initial response here to the latest moves suggests that, once again, what has been offered as significant change may have less impact than appearance indicates.

The pass book—symbol and substance of apartheid



Protest becomes violent as youths riot. Their goal: A new South Africa

"It's the old, sad story of reform," argued *Business Day* newspaper in an editorial. "Government has done enough to arouse right-wing whites, but not enough to solve the problem. Yet its policy may still work provided sufficient land is set aside to permit a process of self-help . . . to get off the ground."

The antiapartheid United Democratic Front was unmoved. "One cannot fail to notice that all these changes are taking place in an apartheid framework promulgated over many years," spokesman Murphy Morobe said. "There is nothing to insure blacks will still not be victims of prejudiced laws."

The respected South African Institute of Race Relations, however, applauded the move. "Along with the statutory recognition of black trade unions in 1979," said the organization, "it is the most important reform in South Africa since World War II."

Under terms of the proposals, so-called influx controls limiting blacks' rights to remain in certain areas of South Africa and seek employment will be repealed. So, too, will curfew laws. All blacks still in jail—thought to number in the thousands—for pass-law offenses are to be released. Mass removals of blacks are to end. Urban development in black areas is to be speeded up. And uniform identity documents for all races will replace the pass book

that blacks up to now have been forced to carry.

Politically, Botha and his backers see the reforms as a way of outflanking black activists and quieting unrest. Economically, influx control has made less and less sense now that as many as half the blacks already live around the major cities. Diplomatically, the laws were an embarrassment to Botha as he struggled against mounting foreign pressure for sanctions against the republic.

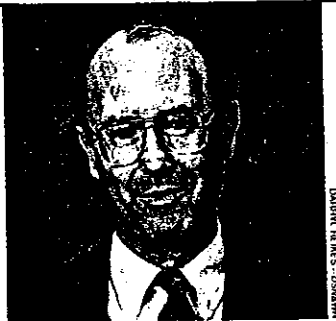
Meantime, while blacks applaud the end of a system that has put more than 18 million behind bars in the last 70 years, there are few signs that black political opinion will soften much.

Even as Botha spoke, fresh violence erupted in Johannesburg's Alexandra township, killing eight. On April 25, riots swept the huge black township of Soweto. Youths fatally stabbed a black policeman at his home—the 33rd such officer slain since March, 1984.

Botha runs considerable risk of inflaming hard-line whites with the new moves. The Conservative Party promptly condemned the reforms as likely to "create slum conditions, encourage violence and have a negative effect on race relations."

Over all, abolition of the pass laws and scrapping of influx controls by themselves will fall far short of transforming South Africa's turmoil. Botha may well have bought time with his latest initiative. But until the central issue of political power is resolved, the chances are that this country's no-war, no-peace standoff between black and white will drag on for many years. ■

by Robin Knight



A conversation with David Gardner, president of the University of California. Gardner headed the national commission that released the report *A Nation At Risk* on April 26, 1983. The report depicted a troubled high-school system and launched a reform movement

America's school system still 'at risk'

Three years ago, our report *A Nation At Risk* warned that society's educational foundations were being eroded by "a rising tide of mediocrity." Some people ask whether we still face that tide today. The tide has started to move out, not in any further. But whether it will continue to recede depends upon our continued determination to improve our high schools. The problems remain as urgent as they were—despite substantive progress in correcting them—because we will lose those gains if we don't continue to build on them. We saw a 10-year period of needed improvement, and we're but a third of the way there.

States and local school districts have responded far more positively and with more enthusiasm and effect than any of us had dreamed possible. They must maintain their active participation. But the reform movement is at a point where initiatives by the federal government would have far more impact than even three years ago.

Secretary of Education William Bennett has a concern about the quality of undergraduate education and elementary schools and is trying, quite rightly, to call attention to those areas. But we don't have to diminish our focus on secondary schools to do so. Secondary schools are the linchpin for reform. If we do a better job at the secondary level, we can do a better job at the freshman and sophomore levels of college. This also will have a corresponding impact on elementary schools. To the extent the federal interest in improving high schools is less vigorously pursued today than it was during the first two years following our report, it suggests less urgency about the problems of the high schools—which is incorrect.

The federal government should do more

The federal government should inventory state and local initiatives to discover what it might do to reinforce them and fill in gaps that states on their own simply are not in a position to cover.

We know that there's going to be a very substantial shortage of teachers in the U.S. and a crisis in terms of mathematics and science teachers. My own state will have to hire a minimum of 100,000 new teachers in the next de-

cade, and that's the most optimistic forecast. This is not just a problem for the 50 states. It's a national problem that the federal government should help to address.

One way would be to offer various initiatives that encourage young people to enter teaching. At present, most financial aid for undergraduates comes as loans, not grants. Young people are graduating with as much as \$15,000 worth of debt. If you're entering a field where you will be able to pay back that debt over a reasonably short period of time, you go ahead and borrow. But if you're planning to enter a low-paying career such as teaching, you tend to borrow less and extend your period of schooling—or choose another field.

The federal government could help correct this distortion by providing fewer loans and more grants to students planning to become teachers or by forgiving one year of a loan for every year the student teaches after graduation.

"There needs to be a stronger partnership"

Teachers' salaries are well short of what they need to be, both to attract able young people and to keep them. Given the market, starting salaries need to be \$22,000 to \$25,000 a year, up from about \$17,000 on average. We must see improvement in the quality of teacher-education programs, with more emphasis on subject-matter preparation and less on the pedagogic course work that has been predominant in schools of education.

We should also expect to see a career ladder develop. As it is now, a teacher is a teacher is a teacher, regardless of competence or years of service. At least in higher education, you have assistant professors, associate professors and full professors. Schools should develop a cadre of master teachers—superior teachers who will serve as role models for junior members of their profession.

There needs to be a stronger partnership between elementary and secondary schools and higher education. It's not sufficient for me to describe the flaws in the schools and then walk away. We need to be there helping. The schools, by the students they send to us, have a direct impact on the education we can offer our undergraduates.

A three-year report card

Since *A Nation At Risk* was published in 1983, every state legislature and local school district has taken some action to improve its schools. The Education Commission of the States reports:

- **Teacher salaries:** All but one state have raised teacher pay in the last two years. In 40 states, increases outpaced inflation, with salaries now averaging \$25,257.
- **Career incentives:** All but 15 states have begun developing plans in which teacher pay and promotion are tied to performance.
- **High-school-graduation requirements:** Since 1980,

**A
Nation
At
Risk:**

31 states have raised them, most in the last three years. More courses are being mandated in math and science.

• **Competency tests:** Thirty states, 10 since 1983, require new teachers to pass competency exams. Arkansas, Texas and Georgia are testing all teachers.

• **Time in school:** Arkansas, Colorado, Nebraska, Ohio and Tennessee have extended the school year by a day or two. Florida, Washington and Wisconsin have mandated statewide extensions of the school day.

Exercise 3: First Impressions

- Objectives:**
1. To help students focus systematically on the key elements of a text.
 2. To guide students to reflect about the information they receive from the key elements of the text.
 3. To help students form hypotheses about the content of an article.

Teacher: Distribute the "Key Elements" chart to students. They can work individually, in pairs or in small groups. One person can act as secretary and record the information obtained from pre-selected texts. Have students complete the chart with information gathered from the text. Go over the results with the class as a whole. Repeat the exercise with as many texts as desired. A number of sample texts have been annexed in this section. (In most cases, the articles have been kept in their original format.)

Exercise 3: First Impressions

Students: Complete the chart with information from the articles(s).

KEY ELEMENTS OF A TEXT

I. Source of text.

A. 1. Name of publication _____

2. Section (sports, medicine, business, etc.) _____

3. Date of article _____

4. Author(s) _____

B. Which of the above information do you think is important to understand the text?

II. Title

A. 1. Title _____

2. Subtitle _____

B. From the title and/or subtitle what do you think the text is about?

C. 1. Do you know anything about the topic of the text?

2. Do you want to know more? _____

III. Illustrations

A. Photographs, maps, graphs, etc. (Yes/No)

B. Captions (Yes/No)

C. What new information did you get from the illustrations?

IV. Divisions of Text

A. 1. How many are there? _____

2. What are they? _____

B. 1. Are the divisions important? (Yes/No)

2. Do they give you more information? (Yes/No)

V. Key Words

- A. Important names, places, nationalities, dates, numbers, words in italics, etc.

- B. Does this information give you a better idea of what the article is about?

VI. Hypothesis

From the information in the chart, what do you think the article will be about? _____

1,000 MW of power (vs. 850 MW for a typical U.S. nuclear generator), the Chernobyl unit had some design features dating back to the atomic pile that Enrico Fermi used in 1942 to create the world's first chain reaction at the University of Chicago's Stagg Field. Both systems employed graphite to moderate the nuclear reaction. Most U.S. units regulate with water instead. About half of all Soviet reactors employ graphite rather than water.

In addition to employing old technology, Soviet engineers and scientists have tended to show much less concern for safety than their Western counterparts. Says Physicist Robert Sachs, director of the Enrico Fermi Institute at the University of Chicago and a strong nuclear power proponent: "Those of us who know something about Soviet safety policy have wondered how they have gotten away without a big accident for as long as they have." The lack of a containment structure for the Chernobyl reactor, which might have limited the emission of radioactivity into the atmosphere after the explosion, is only the most glaring example.

Publicly, however, Moscow describes its nuclear generators as thoroughly up to date. In an article on Chernobyl in the February 1986 issue of *Soviet Life*, an English-language publication, Ukrainian Power Minister Vitali Sklyarov boasted that "the odds of a meltdown are one in 10,000 years." In any case, he added, "the environment is also securely protected."

Yet a recent article in another Soviet publication revealed local worries about safety at Chernobyl. A story printed a month or so ago in *Litseraina Ukraina*, a Kiev publication, attacked shoddy building practices and workmanship at the power station. Writer Lyubov Kovalevska, who lives near the facility, noted "deficiencies" in the quality of construction and demanded that "each cubic meter of reinforced concrete must guarantee reliability and, thus, safety." The article's headline: "It Is Not a Private Matter."

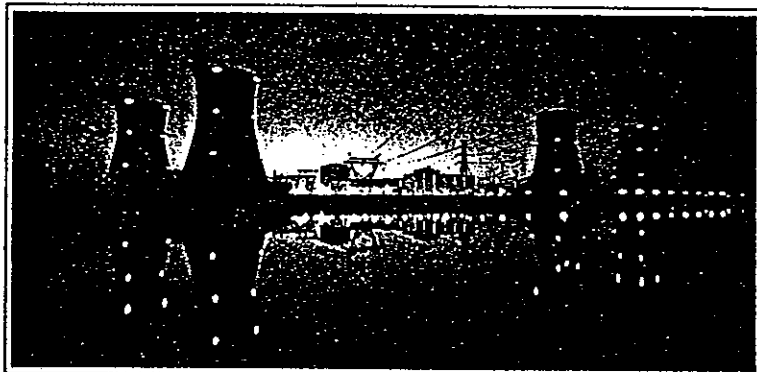
The quality and safety of Soviet-built nuclear reactors is a subject that will soon be close to home for some Americans. The Soviets are helping Cuba install a pair of reactors near the town of Cienfuegos, some 250 miles south of Miami. U.S. experts say that the twin units will use water rather than graphite to moderate the fuel reactions and will apparently be housed in containment buildings. Though full details are unknown, some U.S. physicists familiar with the Western-style reactors say they are probably no more dangerous than several now used in Florida.

Following the Chernobyl accident, the Soviet Union reportedly closed all reactors that were built with the same design, a total of some 20 units that produce an estimated 5% of the country's electricity supply. Nonetheless, the Soviets seem certain to press ahead with their ambitious program of nuclear construction.

Perhaps the Worst, Not the First

The estimated 375 commercial nuclear power plants in operation around the world have now built up more than 3,600 years of experience. But since the first one went on-line at Obninsk in the Soviet Union in 1954, there has always been the fear of an accident. The vast majority of malfunctions pose no serious health threat, yet some problems have required emergency measures. A worldwide count of accidents and casualties at nuclear facilities cannot be made with precision because the Soviet Union, a major user of nuclear power, does not divulge information about such problems until they become impossible to disregard or deny. Some of the most serious reported nuclear mishaps:

Dec. 12, 1952. Accidental removal of four control rods at an experimental nuclear power reactor at Chalk River, Canada, near Ottawa, led to a partial meltdown of the reactor's uranium fuel core. A million gallons of radioactive water accumulated inside, but there were no accident-related injuries. Although negligible in comparison with last week's Soviet accident, it was the first known major malfunction of a nuclear power plant.



Three Mile Island: seven years after the nightmare, the hazards are still being debated

Oct. 7, 1957. Like the Chernobyl facility, the Windscale Pile No. 1 plutonium-production plant north of Liverpool, England, used graphite to slow down neutrons emitted during nuclear fission. When workers discovered a fire in the reactor, they sprayed it with carbon dioxide but failed to quench the blaze. By the time the fire was put out with water, radioactive material had contaminated 200 sq. mi. of countryside. Officials banned the sale of milk from cows grazing in the area for more than a month. The government estimated that at least 33 cancer deaths could be traced to the effects of the accident.

Jan. 3, 1961. A worker's error in removing control rods from the core of the SL-1 military experimental reactor near Idaho Falls caused a fatal steam explosion. Three servicemen were killed, one of them by impalement on a control rod. The deaths were the first fatalities in the history of U.S. nuclear reactor operations.

March 22, 1975. A worker using a lighted candle to check for air leaks at Browns Ferry reactor near Decatur, Ala., touched off a fire that damaged electrical cables connected to safety systems and allowed the reactor's cooling water to drop to dangerous levels. No radioactive material escaped into the atmosphere.

March 28, 1979. In the biggest U.S. mishap, one of two reactors at Three Mile Island, near Harrisburg, Pa., lost its coolant because of equipment malfunctions and human error. The loss of coolant caused the radioactive fuel to overheat and led to a partial meltdown. Some radioactive material escaped, but a potentially major disaster was averted. Although no one is known to have died as a result of the accident, the hazard posed to local residents is still being debated.

March 8, 1981. Radioactive waste water leaked for several hours from a tank at a problem-ridden nuclear power station in Tsuruga, Japan. The workers dispatched to mop it up were exposed to radiation. The problem was not disclosed publicly until six weeks after the accident, when radioactivity was detected in a nearby bay.

Jan. 4, 1986. One worker at the Kerr-McGee Corp. uranium-processing plant in Gore, Okla., died from exposure to a caustic chemical that formed when an improperly heated, overfilled container of nuclear material burst. Some radiation flowed out of the plant, sending more than 100 people to local hospitals.

year's current-account surplus of Nkr26 billion looks like turning into a whacking deficit. Oil exploration and development are already being cut back. At \$10 a barrel new work would come pretty much to an end.

The governing coalition, which has no clear majority in parliament, last month announced some modest spending cuts. They already look entirely inadequate.

Religion in Eastern Europe

God in Gorbachev's backyard

Marx has not chased God from Eastern Europe. After more than four decades of communist rule, religious belief has survived, often in surprising forms. Some people, indeed, reckon that religion has actually been growing stronger under Russia's gaze in recent years.

Eastern Europe's religious map is the outcome of centuries of conflict. The most recent conflict, the second world war, claimed the lives of most of Eastern Europe's Jews, and of those Jews who survived many departed in horror from the region. This left Christianity and Islam as the main faiths (see map). Islam has survived mainly in south-eastern Europe, the part of the continent the Ottoman empire conquered first and held on to longest. Christianity, in a variety of forms, is the main religion elsewhere.

It seems to be holding its own, or better. Because of the political sensitivity of the subject, hard evidence is scarce. What there is comes from three main sources: the communist authorities themselves; the size of crowds at pilgrimages and religious rallies; and stories from émigrés or visitors to the area. Specialist western institutes, such as Keston College near London and Faith in the Second World, of Zurich, conclude that the pace of religious change in Eastern Europe is different in each country.

Poland is a special case. Even when the Pope is not visiting them, his fellow-Poles regularly flock in large numbers to Czestochowa and other favourite shrines. Always the guardian of the Polish sense of identity in trying times, the Catholic church in Poland is probably stronger today than it has ever been. Its strength is reflected in its priesthood. While the Catholic church in the West suffers from an acute shortage of priests, Poland has more than it needs and is exporting them to the West and the Third World. In 1984, 8,130 young men were studying for the priesthood compared with 5,850 in 1979.

In mainly Protestant East Germany, years of atheist education and secularisation have taken their toll. Only every fifth baby born there today is baptised. Instead of acting—as the Catholic church has done in Poland—as a permanent force of

With labour costs still rising, Norwegian manufacturing industry is in poor shape to compete on world markets and so make up for the loss in oil exports. Local industry does not even benefit much from cheaper oil, as it mostly uses even cheaper hydroelectric power. The government appears to hope that this week's turmoil will help break the Norwegian's bland expectation that prosperity is for ever.

culminated in a semi-concordat between the government and the church in 1978 and the celebration, in which both the state and the church took part, of the 500th anniversary of Martin Luther's birth in 1983.

However, the East German Protestant church has in recent years attracted large numbers of young people to its public gatherings, to discuss topics such as peace and justice. This appears to worry the communist party: there have been reports of growing harassment of believers, and of continuing discrimination against them in employment, education and housing. Bishop Albrecht Schönherr, who was the senior Protestant churchman in East Germany from 1969 to 1981 and negotiated the 1978 agreement with the regime, publicly protested in February.

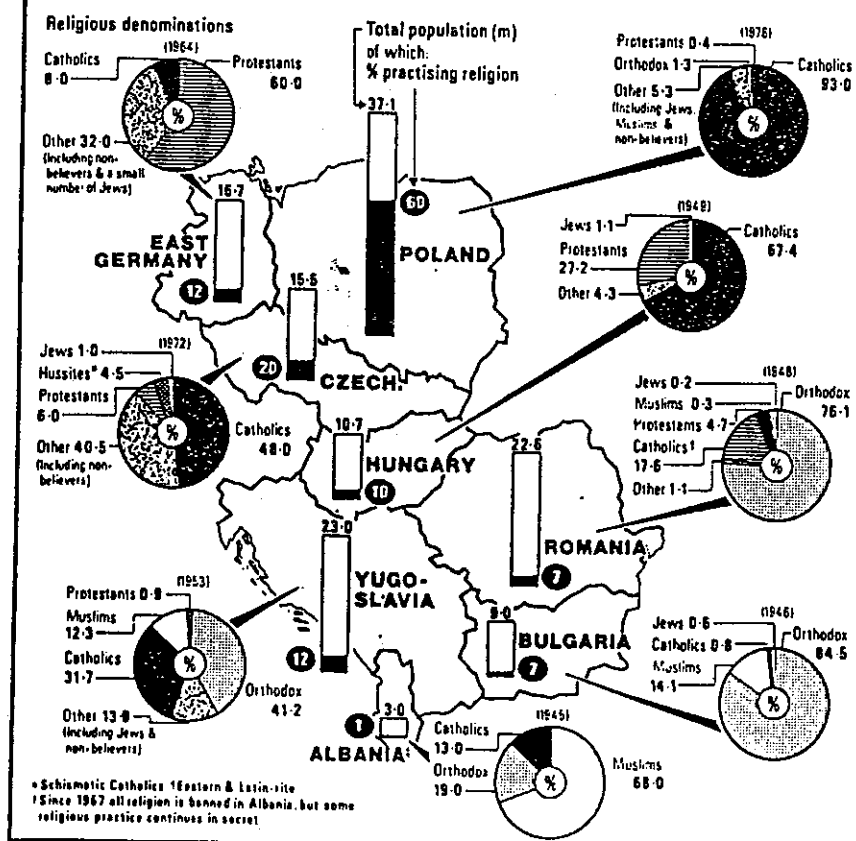
In Czechoslovakia, official concern about the spread of religious belief has risen noticeably since last July, when large crowds attended the celebrations of the 1100th anniversary of the death of St Methodius, a monk who worked as a

opposition, the Protestant church in East Germany has chosen to be the *Kirche im Sozialismus* (church within socialism), rather than *Kirche gegen Sozialismus* (church against socialism). This policy

A mosaic of faiths

The pie-charts show the nominal religious make-up of each country according to the latest available census or official survey (dates in brackets). The bar charts show estimates, by Keston College, of actual religious practice in each country: active religious practice is taken here to mean, for Catholics,

weekly mass-going and taking of sacraments; for the Orthodox, attendance in church for the high holidays and observance of Orthodox customs; for Protestants, membership of church rolls; and for Muslims and Jews, occasional attendance at public worship plus some observance of dietary laws.





Praying for life after Marx

missionary among the Slavs. A crowd estimated at 150,000, two-thirds of it young people, turned up on July 7th in Velehrad, in the Czech part of the country, where Methodius is believed to be buried. Almost as large a crowd turned up on the same day at a Slovak shrine.

Within the past few months, senior party officials have accused the Vatican of trying to turn the Catholic church in Czechoslovakia into a centre of political opposition in order to "weaken and destabilise socialism". An educational paper, *Ucitelske Noviny*, has called for atheistic propaganda to be more efficient. These statements have been accompanied by a crackdown on religious activists in Czechoslovakia's "basic communities"—small groups of people, mainly in the cities, who number at the most 5,000.

After a strong hint in February in a Polish Catholic paper close to the Pope, it seems likely that the Vatican may decide to rehabilitate Jan Hus, the Czech reformer condemned for heresy and burnt at the stake in Constance in 1415. That would cause the Czechoslovak government further alarm. For centuries, Jan Hus has been the most potent symbol of anti-Catholicism among the Czechs and, as such, an indirect ally of the communists as well.

Claims that "basic communities" in Hungary may involve as many as 100,000 people are almost certainly exaggerated. But these informal groups, which usually meet in the presence of a priest to meditate, talk about religion and receive the sacraments, do seem to be attracting more young members. In an interview in 1984 Imre Miklos, the minister in charge of religious affairs in Hungary, conceded

that young people were increasingly interested in religion, and added that this interest should not be "forced back".

The activities of some groups, notably that led by Father György Bulanyi, a Piarist, appear to worry the authorities, partly because some of their members want an alternative, non-military form of national service, but also because these loose little organisations are harder to keep under control than the clergy and their congregations at public church services. In its attempts to silence Father Bulanyi, the government has enlisted the help of Cardinal Laszlo Lekai, the docile head of the Catholic church in Hungary.

In predominantly Orthodox Romania and Bulgaria, there have recently been calls for an intensification of the struggle against "religious anachronisms". What worries the governments of these two countries is not so much the Orthodox church, which in both places (and in accordance with a fine old Byzantine tradition) toes the official line, but the small Protestant sects which seem to be springing up everywhere. These include Baptists, Pentecostals, Adventists and Jehovah's Witnesses.

The American revivalist Billy Graham was allowed into Romania last September, probably to make the American Congress think kindly of that country when its most-favoured-nation trading status was coming up for discussion in Washington. Without much other help from the authorities, Mr Graham addressed some 150,000 people in ten days.

Both Romanians and Bulgarians seem to go for the mystical. The Society for Transcendental Meditation was popular among intellectuals in Romania until a crackdown at the beginning of the 1980s. In Bulgaria the study of yoga was not only tolerated but actually encouraged by Lyudmila Zhivkova, late daughter of the party leader, Mr Todor Zhivkov.

In Yugoslavia, the young were prominent among the 300,000 people who attended a Roman Catholic eucharistic congress in Croatia in September 1984. Some 15,000 youngsters turned up for a two-day "youth encounter" in Zagreb cathedral last October. A year ago, in an opinion poll commissioned by the Communist-controlled youth organisation in Split, 52% of the 748 youngsters questioned described themselves as religious (a similar poll in the city carried out nearly 20 years earlier produced a figure of 33%). When asked to select from a list of 24 famous Yugoslavs and foreigners the person who came closest to their ideal, most plumped for Mother Teresa, the Albanian-born nun famous for her charitable work in India, and the Pope came third. Lenin came last, with only 5% of the poll.

There has also been an increase of

religious earnestness among Yugoslavia's 4m Muslims, notably the 2m who live in Bosnia. Yugoslavia's Islamic friends in the non-aligned world have chipped in money for new mosques and free places for Yugoslavia's young Muslims to study at Islamic universities. The resurgence of Islam can go too far. In August 1983 some Bosnian Muslims, including two imams, were sentenced to a total of 90 years' imprisonment for allegedly advocating an Islamic republic in Bosnia.

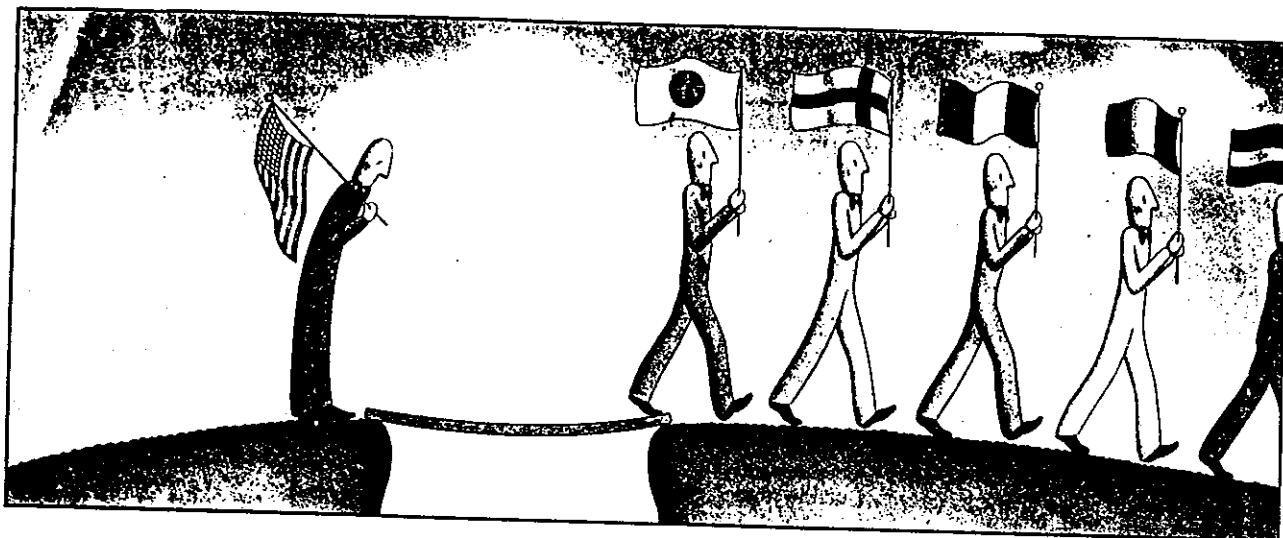
Albania is the only officially atheist state in Eastern Europe (or the world). Nevertheless, there is evidence that religious practices survive even there. Christians secretly baptise new-born children and perform wedding ceremonies. Secret believers make their own crosses and rosaries. Islam was the majority religion in Albania before all religion was banned in 1967, but it has suffered badly from persecution.

To the dismay of unbelief

Talk of a "religious revival" in Eastern Europe is misleading; the phrase suggests that the scale of the turn—or return—to religion is grander than it probably is. But many East Europeans are clearly attracted by alternatives to the ideology of Marxism-Leninism, which has little to offer when it comes to questions of personal philosophy and ethics: the meaning of life and death, for example, or how to mend a broken marriage. For some, the alternative may be pop music or drugs. For others, it is religion.

East Europeans disillusioned by what their communist parties offer them seem to be attracted to the churches because they are the custodians of traditional values. Often, too, the churches help to keep alive a sense of national identity—and not only in Poland. The Serbian Orthodox church in Yugoslavia has emerged as a spokesman in the fight to maintain a Serbian presence in, if not control over, the now largely Albanian-inhabited province of Kosovo.

The stubborn survival of religion in Eastern Europe, and its growing appeal in some countries, pose a question for the region's governments that none of them has yet been able to answer. For most of them, persecution of believers is no longer fashionable. It is harder to conceal than it was in the 1940s and 1950s and, when discovered, does the persecutors no good at all: witness the murder of Father Jerzy Popieluszko by three Polish secret policemen in 1984. That is why East European governments, apart from Albania's, have tried to be flexible. But none has yet accepted that religion is there to stay. The governments of unbelief try to avert their gaze from the belief which they wish would go away, but won't.



NUCLEAR ENERGY

Is America being left behind?

Twenty-six countries now produce nuclear-generated electricity. Six more plan to do so by 1990.

In a competitive world market where abundant energy is a must, can America afford to fall behind in the very technology we pioneered?

Nuclear energy is now our second leading source of electricity, behind coal.

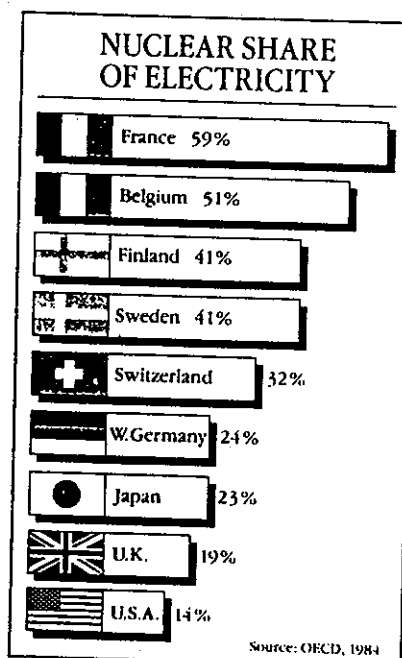
But not one future nuclear plant has been planned in the United States since 1978, while at least 50 have been ordered in other parts of the world.

Nuclear electricity is growing worldwide

More than 360 nuclear power plants are producing electricity today. Japan, France, the Soviet Union, and now China are among the many nations committed to nuclear electricity as an economic, safe alternative to oil.

Japan knows that nuclear power has cut its dependence on oil from the Middle East. And Japanese companies are designing advanced reactors, making it possible to gain the edge in nuclear energy technology.

In France last year, close to two-thirds of the electricity was nuclear-generated. It takes only six years or so to get a nuclear plant built there,



Many countries are relying on more nuclear electricity to lessen their dependence on foreign oil.

which is about half the average time it now takes to build one in the U.S.

A secure America needs a balanced mix of energy sources

Our country has a lot more oil, natural gas, and coal than either France or Japan. But oil supplies are still vulnerable to foreign disruptions. Natural gas is more valuable for other uses than for burning in power plants.

And coal, which already provides 57% of our electricity, can't be expected to do the job alone.

What is best for the practical generation of large amounts of electricity? The National Academy of Sciences has stated that "Coal and nuclear power are the only economic alternatives for large-scale application in the remainder of this century."

Nuclear energy for energy independence

Through the growing use of nuclear electricity, countries all over the world are reducing their dependence on oil. (OPEC admits that nuclear plants worldwide have permanently hurt its oil business.) Strengthening their position in increasingly competitive world markets, these countries realize that a healthy national economy needs a secure supply of electric energy.

Will we have to play a costly game of catch-up in the competition ahead? America runs the risk of doing just that—if we ignore the growing international reliance on nuclear energy, and the reasons behind that growth.

For a free booklet on energy independence, write to the U.S. Committee for Energy Awareness, P.O. Box 1537 (BB1), Ridgely, MD 21681. Please allow 4-6 weeks for delivery.

Information about energy
America can count on
U.S. COMMITTEE FOR ENERGY AWARENESS

Space

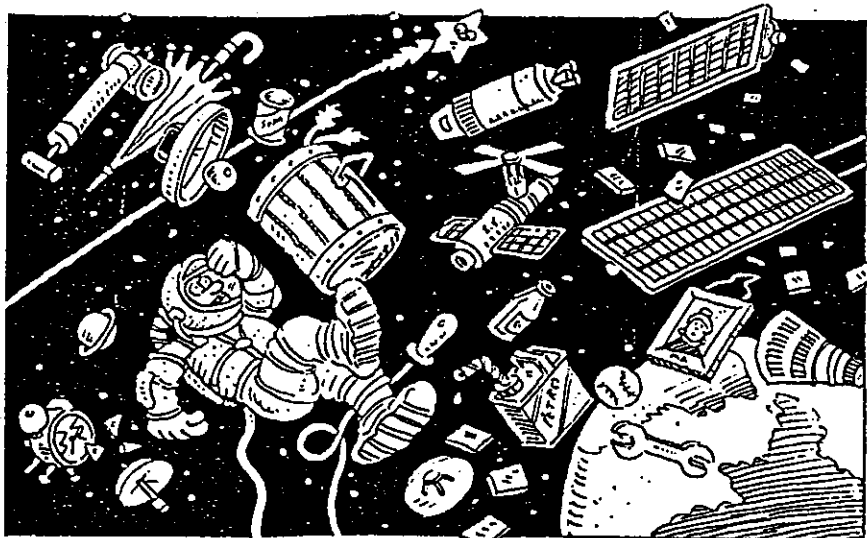
Dodging Celestial Garbage

Right now, there are 3,800 pieces of junk circling the earth

To the minstrels of medieval Europe, the moon was a kind of celestial junkyard. They consigned to lunar banishment a dolorous assortment of such earthly intangibles as broken vows, fruitless tears and misspent time. Today the moon is a repository of more substantial material: it harbors a pile of gear, left behind by Apollo astronauts, that includes one moon buggy, \$5 million worth of camera equipment and two golf balls that Alan Shepard whacked with a makeshift six iron to unplayable lies in a boulder-strewn valley. Still, this lunar refuse

age, food containers and spent oxygen cylinders overboard. On rare occasions, space walkers have accidentally dropped objects in space. Astronaut Ed White lost a shiny white glove during the Gemini 4 flight in 1965. George ("Pinky") Nelson fumbled away two tiny screws while repairing the Solar Maximum Mission satellite during the shuttle flight last month.

Objects in low earth orbit circle freely until the slow wear of molecular friction and the force of gravity cause them to re-enter the earth's atmosphere at a blazing 18,000 m.p.h. and subsequently burn up.



is paltry by comparison with all of the man-made debris now sailing noiselessly through the cosmos.

The North American Aerospace Defense Command (NORAD), which is responsible for providing early warning against aerial attacks, estimates that some 3,800 pieces of junk are currently circling the earth.* Total weight of this space-age garbage: six tons. Two-thirds of the nuts, bolts, oxygen cylinders, broken solar panels, dead satellites, spent rocket boosters and other litter is in geosynchronous orbit 22,300 miles from the earth's surface, where it will remain indefinitely. One-third of the circling scrap is in low earth orbit, only 120 to 300 miles overhead.

Most of the space garbage consists of nonfunctioning satellites and space probes launched from earth. There is also fragmentary junk, resulting from mid-space collisions between spacecraft and meteorites. Astronauts have dumped sew-

* Even that count is incomplete, since NORAD did not include objects that have escaped the earth's gravitational clutches, such as the abandoned Viking lander on Mars or Pioneer 10, which last June flew beyond the outermost planet of the solar system.

That was the fate of the first man-made satellite, the 184-lb. Soviet Sputnik 1, which incinerated in the heat of re-entry three months after its historic launching on Oct. 4, 1957.

Since then 9,695 man-made objects have fallen from orbit, but the number that survived the atmospheric plunge to hit the earth is unknown. Shards have landed on more than a dozen nations, including Zambia, Finland and Nepal. As early as 1961, Premier Fidel Castro indignantly charged that a re-entering chunk of a U.S. spacecraft had struck and killed a Cuban cow. A year later, a 21-lb. metal cylinder landed at the intersection of North 8th and Park streets in Manitowoc, Wis. The debris was later identified by the U.S. Air Force as a fragment of Soviet Sputnik 4, launched two years earlier. It was the first certified piece of space litter to hit the U.S. In 1963 a charred metal sphere with a 15-in. diameter turned up on a sheep ranch in New South Wales. It was part of a Soviet space vehicle, but the U.S.S.R. never claimed it.

The probability of space rubble hitting a person is so small that Lloyds of

London considers the odds impossible to calculate. Nevertheless, in 1969 a Japanese freighter in the Sea of Japan was struck by wreckage from a Soviet spacecraft. There were reports from Tokyo that five crewmen were seriously injured. They remain the first and only victims of debris from space.

Perhaps the two most celebrated space-trash incidents took place within the past decade. In 1978 Cosmos 954, a five-ton, nuclear-powered Soviet ocean-surveillance satellite, lost altitude: its remains were scattered over hundreds of square miles of sub-Arctic Canada. The following year, NASA's 77½-ton Skylab broadcast a trail of wreckage across the Indian Ocean and Australian outback. There had been plenty of advance warning that both craft were in trouble, although scientists could not accurately predict where the debris would land.

More serious than the danger to earth is the threat that space debris poses for satellites and other extraterrestrial conveyances. Shuttle 10 returned to earth last February with a pea-size pit in its windshield. NASA has reserved judgment on the cause, but the dent is probably the result of a micrometeorite strike or a fragment of titanium, beryllium or other space-age material striking the craft.

Orbital space has become so crowded in recent years that launched objects frequently pass within 30 miles of one another. NASA intentionally sent off the most recent shuttle at the earliest possible opportunity in April to make sure that the orbiter would fly no closer than 130 miles to Soviet space station Salyut 7. Said a Kennedy Space Center launch technician: "We have had a kind of unwritten agreement with the Soviets to keep our launch vehicles at least 200 kilometers away from their birds."

Despite measures taken to prevent accidents, two U.S. satellites collided in 1965, scattering a cloud of debris in their wake. Evidence suggests that in 1981 Cosmos 1275, a Soviet navigation satellite, was blown into 135 fragments by an errant piece of space debris. In 1975 a metallic U.S. communications balloon deflated after colliding with a junk fragment.

The success of last month's Solar Max satellite repair mission provided a potential solution to some of the orbital traffic headaches. NASA has suggested that on future missions space-walking astronauts may be able to collect some of the space junk with grapples, rope it in line like freight cars, attach the tethers to rockets and propel the material either into the earth's oceans or to special garbage dumps in space. One possible site: the moon. "Who knows?" says one NASA official. "A junkyard out there could be a good place for us to find spare parts one day."

—By Jamie Murphy.

Reported by Jerry Hannifin/Washington

When the bullets start to fly

If Israel and Syria went to war again, there seems to be little doubt that Israel would win handily, even though it is outnumbered in ready-to-fight soldiers and tanks (see table). There are two main reasons. One is that the training of Israel's fighting men, and the potency of their equipment, are much better than Syria's. The other is that simple tabulations of men and equipment do not tell the whole story. An army's efficiency at mobilising and fighting matters at least as much. Several untabulatable facts would weigh heavily in Israel's favour in any battle:

- Israel has a highly effective system of mobilisation, which would pour tens of thousands of extra trained men and women into its armed forces within a few hours. Syria is not as well organised.
- Israel's tanks are better than Syria's. Only about 1,000 of Syria's are recent-model Russian T-72s; the others are much older (although Syria may have received a few T-72s, which are comparable with the T-72s, in the past few months). Isra-

Tanks, for example, are opposed not just by other tanks, but also by aircraft, artillery, hand-held anti-tank weapons and helicopters. Israel's armed forces are much more skilled than Syria's at combined-arms co-ordination.

- Israel is a master of all kinds of electronic warfare. In some of them it is more advanced than either the United States or the Soviet Union. It ought to be able to disrupt Syrian radar almost completely, and it can probably ward off Syrian missiles, and put its own missiles on Syrian targets, more efficiently than the Americans did in the Gulf of Sirte skirmish last month.
- Israel's weapons, particularly its aircraft, are better maintained. It could get more battlefield hours—or aircraft sorties—per day out of its machines.
- Israel's pilots are the best-trained in the world. They would not only take the measure of Syria's air force but would also count heavily in the ground fighting.

All this suggests that Israel would win. But a similar analysis could have been

The balance of force

	Tanks	Combat aircraft	AFVs*	Helicopters	Men in army
Israel	3,600	684	8,000	187	104,000
Syria	4,200	500	3,000	263	270,000

Figures are mid-1985 estimates. The numbers may have changed slightly since then, but not enough to have altered the general picture. *Armoured fighting vehicles—light vehicles such as armoured personnel carriers.
Source: International Institute for Strategic Studies.

el's tanks boast a variety of things Syria's do not possess, such as reactive armour (explosive packets on the outside of the tank's armour that detonate when struck by an incoming projectile and break it up or deflect it).

- The effectiveness of one sort of weapon depends in part on how successfully it is used in conjunction with other sorts.

made in 1972 about the relative strengths of Israel and Egypt. A year later Egypt's attack across the Suez Canal, delivered with great skill, speed and surprise, came within a hair of breaking through into Israel itself. Israel now seems better prepared to meet an attack, but once the bullets start to fly unexpected things can happen.

is that Syria would almost certainly lose a war with Israel, as it has periodically done during the past 38 years (see box). On the day Israel's invasion of Lebanon began in 1982, Israel knocked out at least 80 Syrian aircraft—a large chunk of the Syrian air force—while losing only two aircraft of its own. The Syrians have, of course, been trying hard to make good that loss, but the MIG-21s and MIG-23s that still make up the core of their air force remain no match for Israel's F-15s and F-16s.

In any event, how many extra arms Syria has recently got from Russia is open to doubt. Western diplomats in Damascus have not spotted any new T-60 tanks or SAM-10 and SAM-11 missiles, let alone MIG-29 aircraft, all of which the Israelis say are being delivered. Syria has been improving its anti-aircraft defences for several years, but that does not prove intent to start a war.

The Israelis are better placed for a fight than Syria, and have better reasons for keeping up the propaganda beat on the war drums. The first Israeli talk about war came last year, when there was still a chance of an agreement between the PLO, Jordan and America about land-for-peace negotiations with Israel. Worse, from Israel's point of view, Syria and Jordan seemed close to halting their feud.

Those worries have faded. But Israel's politicians and generals might still find it tempting to make Israel safe, for four or five years, from its most bellicose Arab neighbour by launching a short, sharp pre-emptive war. Moreover, as the contest inside the Israeli government between Labour and Likud gets hotter (see next article), Mr Peres has presumably contemplated his Labour party's likely electoral gains from a quick victory over his most serious Arab enemy.

None of this suggests that the Syrian-Israeli war of words is likely to be replaced soon by one with bullets. But it is unwise to bank on rational decisions in the Middle East. Most people did not expect an Egyptian attack in 1973, because they thought Mr Sadat's army would take a beating. It may not make sense for Mr Assad to chance his arm across the Golan Heights. But if the Syrians did manage to prolong a conflict beyond the stage of a high-powered aircraft-and-missile duel, in which Israel has its greatest advantage, and turn it into a drawn-out war of attrition on the ground, then Mr Assad could stand to gain. The Syrians are not a pushover, and Mr Assad may think the stakes are high enough to gamble on.

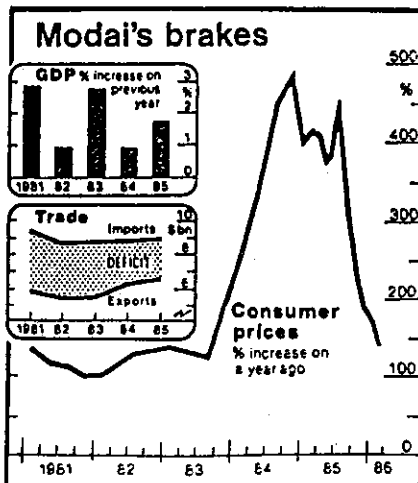
Israel

Don't talk to me like that

FROM OUR ISRAEL CORRESPONDENT

Most Israelis are sure that Mr Shimon Peres would dearly like to go on running the country, even though, under a special arrangement, he is supposed to hand over the job of prime minister to his rival, Mr Yitzhak Shamir, in October. This week it looked as though Mr Peres's chance of holding on at the top might have arrived.

Brinkmanship and squabbling within and between the parties, especially Mr Peres's Labour party and Mr Shamir's Likud block, are the meat of Israeli politics. The latest episode, however, has been hyper-energetic even by Israeli standards. Mr Yitzhak Modai, the finance minister, who is a senior Likud man, became embroiled with Mr Peres after accusing the prime minister, on April 4th, of backing economic measures that amounted to "robbery": the prime minis-



Poor Little Energy-Rich Kids

A gusher of financial woes swamps major foreign suppliers



As oil prices have taken their steepest plunge ever, energy producers from Mexico City to Moscow have felt the pinch. While some are suffering more than others, no major petroleum exporter has entirely escaped the pain. A look at the economic and political woes that cheap oil is causing once mighty producers around the world:

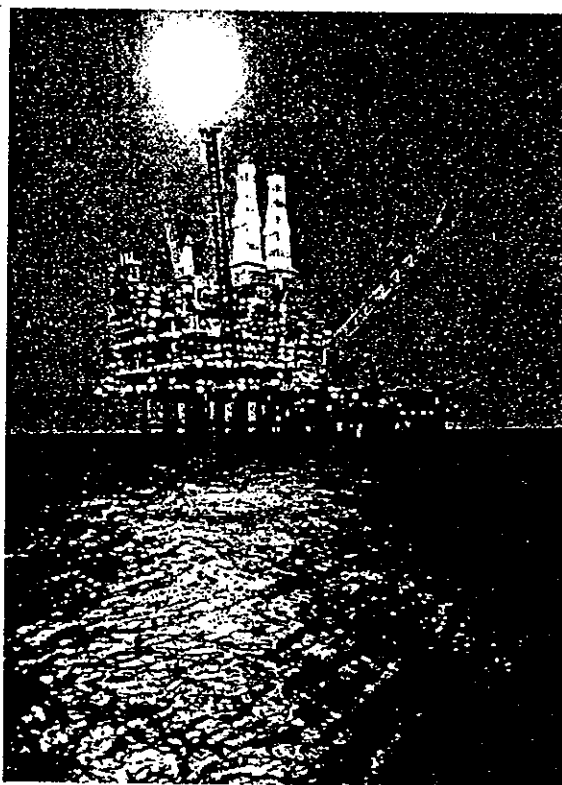
LATIN AMERICA. Mexico is No. 1 on the list of endangered energy exporters. It earns 70% of its foreign exchange from the sale of oil, and this year's price declines will slash revenues by about \$6 billion. That could make it virtually impossible for the cash-strapped country to meet payments on the \$97 billion it owes to foreign countries. Some economists now estimate that Mexico stands an 80% chance of defaulting on its mountain of debt. Several experts say that conditions are already more dire than in 1982, when a temporary Mexican default sent ripples of panic through the international financial system.

Mexican government officials have been pressing U.S. banks and other lenders to relax their terms and extend to the country at least an additional \$4 billion in new loans. President Miguel de la Madrid Hurtado warned that bankers must share "the responsibility and sacrifice" of solving Mexico's financial ills. So far, though, creditors have been wary of risking new money.

Meanwhile, tens of thousands of Mexicans have demonstrated against austerity measures that De la Madrid has imposed since 1982 in an effort to pay interest on the country's loans. The belt tightening has slashed government spending, shoved the economy into a painful recession, and boosted unemployment to about 15%. "The political system is being pushed into a corner," says Jonathan Heath, senior economist for Ciemex-Wharton, the Mexican division of Philadelphia-based Wharton Econometric. "A lot of people in the government want default, and though they are not the ones with the most clout now, at any given moment they could be heard."

Events are moving swiftly in Venezuela too. No sooner did Caracas refinance nearly two-thirds of its \$35 billion foreign debt last February than plummeting oil prices made the agreement obsolete. The free fall is knocking at least \$5 billion

off the country's petroleum revenues, which account for more than 90% of its foreign exchange, and could force President Jaime Lusinchi to return to bankers to seek better terms. With the country now in the third year of a recession, Lusinchi has little political room to maneuver. He has already promised that a job-creating \$5 billion public-works program will not be touched. Venezuelans are counting on their nation's \$13.7 billion of



A North Sea platform pumping crude around the clock

No major exporting nation has escaped unscathed.

foreign-exchange reserves, the largest in Latin America, to see them through the current crunch.

MIDDLE EAST. Although Saudi Arabia remains wealthy by any standard, it is by no means immune to the impact of cheap oil. Government spending, the engine that drives the country's economy, has fallen from a high of \$92.7 billion in fiscal 1982 to \$54.8 billion in the current year. Even so, the kingdom's budget deficit is swelling by an estimated \$1 billion a month. The drop in spending has slowed construction projects across the country, created an exodus of foreign workers, and overwhelmed the Islamic court system with bankruptcy proceedings. Only interest-free government deposits have kept many banks from failing. Says a top Saudi

official: "During the boom, the country generated tremendous wealth. Now the cycle is reversed. Every time we cancel a project, the ripple effect washes over the entire economy."

The slowdown comes at a time when such monumental undertakings as the \$3.4 billion Riyadh International Airport and the \$18 billion industrial city of Jubail are largely complete. Yet those and other ambitious projects will now cost millions to maintain. Perhaps because of that, the suddenly penny-pinching Saudis have been making life miserable for foreign companies accustomed to more opulent treatment. "It's horrible now," says one American contractor in Riyadh.

"They don't pay, there's little new business, and they nickel-and-dime you to death with inspections and rules."

Politically, however, Saudi Arabia remains stable. The House of Saud is closely allied with the country's religious leadership and controls the key sectors of the economy. Most observers agree that oil prices could fall much further without affecting the family's rule.

Elsewhere in the gulf, other thinly populated oil producers are suffering assorted woes. Kuwait, which survived a stock-market crash in 1982, faces a \$1 billion budget deficit this year. Yet the idea of cutting the country's generous welfare-state outlays remains wildly unpopular. In Oman, declining oil prices will hold the economy's growth well below the whopping 14% gain achieved last year and will force the government to curtail projects in its five-year plan. Omanis are already borrowing abroad and using foreign currency reserves to finance budget shortfalls. The United Arab Emirates, a federation of seven sheikdoms, has been politically weakened by the oil-price collapse. The federal government that binds the state together is virtually broke, and the two leading emirates, Dubai and Abu Dhabi, are reluctant to dip into their own shrunken treasuries to bail it out.

Embattled Iran is staggering from the effects of both cheap oil and the stale-mated war with Iraq. Tehran has scaled back imports for heavy industry, triggering a sharp recession and boosting unemployment. While staple foods are inexpensive under the government ration system, they are exorbitant on the black market, to which most Iranians are driven by the skimpy official allotments. War spending remains the top priority of Ayatollah Ruhollah Khomeini, Iran's spiritual leader. Since few countries will openly sell it military equipment, Tehran must use its shrinking energy income to buy weapons on the inflated international black market.

Economy & Business

Iraq also needs to provide guns and butter at a time when export revenues are falling fast. Baghdad previously financed both economic development and its military campaign against Iran by drawing on \$35 billion in currency reserves and refinancing its estimated \$40 billion of foreign debt. Now the reserves are gone, and international creditors are rapidly losing patience. Last week President Saddam Hussein reportedly approved an austerity program calling for drastic cuts in imports. That will come as a shock to most Iraqis, who have managed to live well despite the war.

AFRICA. The sharp downturn in oil prices threatens Egypt's fragile economy and the regime of President Hosni Mubarak. Petroleum is the country's largest export, bringing in some \$2.1 billion in the most recent fiscal year. The latest tumble will cut those earnings nearly in half if prices remain at their present level. "It is a devastating blow to the Egyptian economy," says a Western diplomat in Cairo. With foreign debts of \$30 billion, Egypt could find it extremely difficult to halt subsidies to consumers on everything from fuel to foodstuffs and make other moves sought by U.S. creditors and the International Monetary Fund.

Libya's economic problems are less acute than Egypt's, but Colonel Muammar Gaddafi's government is also being squeezed. Libya earned \$22 billion in oil revenue just four years ago, enabling Gaddafi to support, in addition to terrorism, numerous political causes around the world and to embark on major projects and welfare programs at home. This year Libya could earn as little as \$5 billion from oil production, and Westerners in Tripoli say the country faces a growing cash crisis. Imports have been sharply cut, and long lines regularly form for basic consumer goods. Such hardships, though, are unlikely to limit Gaddafi's ability to export terrorism. "He may not be able to stand up to the U.S. Sixth Fleet in the Gulf of Sidra," said one Western observer, "but he can set off a lot of bombs for very little money using all the resources available to him."

Nigeria appears, next to Mexico, to be the oil producer closest to defaulting on its foreign loans. The West African nation gets fully 97% of its export earnings from the sale of oil, and thus has no other way to pay its \$12 billion in medium- and long-term debt. Major General Ibrahim Babangida, who became President last August in a military coup, has said that Nigeria will devote no more than 30% of its income from abroad to meeting the \$44 billion in principal and interest due this year. Fears of default swept Nigeria's bankers this month when Babangida declared a 90-day moratorium on commercial-loan payments. He may now have to impose new austerity measures on top of already painful spending cuts.



Welding pipe at a Mexican refinery

NORTH SEA. Despite the oil-price collapse, Britain has steadfastly maintained production at about 2.6 million bbl. a day. London insists that the advantages of cheap oil far outweigh the damage that it causes. "We are still basically an industrialized country," says David Kern, chief economist for National Westminster Bank PLC, "and we will be better off if the whole world economy tends to grow faster." Still, petroleum companies are chopping their exploration budgets, and the government itself has been caught in a cash squeeze. With oil at \$10 per bbl., tax receipts from North Sea production will shrink to about \$4.4 billion in 1986, vs. \$16.9 billion a year ago. The decline has forced Nigel Lawson, Chancellor of the Exchequer, to pare back proposals for a tax cut from \$4.4 billion to \$1.5 billion.

Norway, which gets 20% of its nation-



Cleaning a giant drill bit in Oman
Hardship spreads across the Persian Gulf

al income from the oil wells beneath its continental shelf, is heading for trouble. "Only the very few have realized the grave misfortune that is about to strike us," says Finance Minister Rolf Presthus. The oil-price drop has forced the Norwegians to consider suspending development of major new petroleum fields. The price decline will also probably cause Norway to suffer a balance of payments deficit for the first time since 1977. That prospect has led the government to take a hard line against wage demands, thus stirring labor unrest.

OTHER MAJOR PRODUCERS. Canada counts oil only fourth among its exports, but declining prices are causing serious distress in the western province of Alberta, the country's main energy source. Bill Richards, an Alberta-based oil-well owner, calls the recent price plunge the industry's "worst setback in modern history." Almost all of the 3,000 jobs that Canadian oilworkers have lost since January were in Alberta. Dale Tufts, president of the Petroleum Services Association, says the group's 300 companies may have to lay off half their 30,000 workers nationwide.

Falling oil prices have forced Calgary-based Dome Petroleum to ask creditors to forgo up to \$1 billion in 1986 principal and interest. To ease the burden on Dome and other ailing producers, Alberta Premier Donald Getty wants Ottawa to grant new tax breaks to the oil firms. But the federal government, whose revenue projections are based on a petroleum price of \$22 per bbl., can hardly afford financial favors.

The Soviet Union, the world's largest oil producer (12 million bbl. a day), depends heavily on petroleum exports to pay for imports needed to stimulate its stagnating economy. General Secretary Mikhail Gorbachev hopes that increased imports from the West will enable his country to double its national income by the year 2000. But a drop in oil prices to \$10 per bbl. could crimp those ambitious plans. Notes a Western expert based in Moscow: "When their oil earnings fall, the Soviets have less money to spend. We have no doubt that the decline in prices has made them rework their Five-Year Plan and has slowed down their modernization drive, at least in the short term."

The Soviets have several options for keeping the drive alive. They are likely to seek additional credit from Western banks, on top of the estimated \$30 billion they already owe, to finance the purchase of high-tech goods. Moscow could also bring in additional foreign currency by selling some of its gold hoard on the open market. Whatever the Soviets decide to do, they are unlikely to let falling oil prices endanger their mighty military machine, which has long had first call on the country's financial resources.

—By John Greenwald, Reported by Andrea Dabrowski/Mexico City and Barry Hillenbrand/Bahrain, with other bureaus

ANOREXIA NERVOSA

IS THE FAMILY TO BLAME? CAN THE FAMILY HELP?

By Carolyn A. McNurlen

She was the perfect child: bright, courteous, and well-liked. But something went wrong. Dissatisfied with her appearance, she decided to go on a diet "just to lose a few pounds." To the horror of family and friends, the seemingly normal 17-year-old began to waste away before their eyes, a victim of the nightmarish condition known as *anorexia nervosa*, the starvation disease.

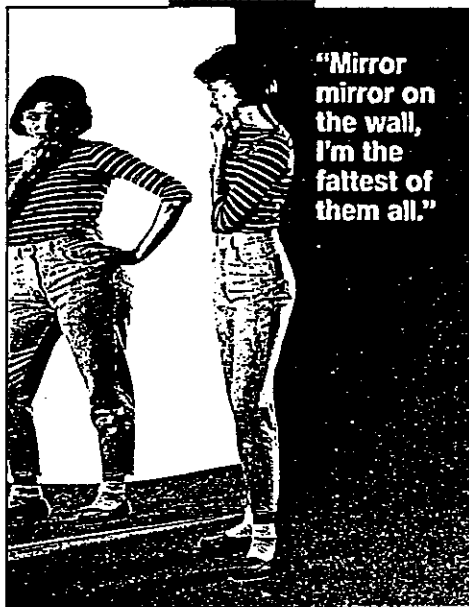
The term *anorexia nervosa*, meaning "nervous loss of appetite," is misleading. A person who has it thinks about food constantly, but fights off the urge to eat. Food intake often drops to 300-600 calories a day. Adolescent girls and young adult women are most likely to develop anorexic symptoms, although older women may be affected as well. Less than 10 percent of reported cases involve males.

Families may set the stage

Anorexia nervosa is an enigma, frequently striking young women who are high achievers and excellent students. But experts now believe that the anorexic's relationship with her family may be central to the onset of the disease.

One of the nation's leading authorities on anorexia nervosa, Dr. Joel Yager, professor of psychiatry and director of the Eating Disorders Clinic for UCLA, suggests that while no single factor causes self-starvation, anorexics are more likely to come from families with these characteristics:

- **Poor communication within the family.** Family members may not be sensitive to the emotional needs of the potential anorexic. Parents may be too busy—or unwilling—to confront important, emotionally charged issues. The child then feels ignored and looks for ways to be noticed.



"Mirror mirror on the wall, I'm the fattest of them all."

An alarming number of young women are reacting to the pressures of growing up by starving themselves. Parents play a key role in preventing and overcoming this baffling disease.

- **Children valued mainly for their appearance or accomplishments.** When a parent tells a child, "I want you to be the prettiest girl at the country club," or "I'm counting on you to letter in track," the child may be afraid of losing that parent's love if these goals aren't met. A girl's inability to meet her own needs while at the same time trying to satisfy her parents' expectations may lead to frustration and resentment, bringing on anorexic symptoms.

- **Family members excessively conscious of body size.** A child is put down for not being superfit and slim.

- **Depression and alcoholism in the family.** Anorexics often come from families where at least one member suffers from depression or alcohol-

ism. Both situations aggravate some of the emotional problems that may help precipitate anorexia nervosa.

The result: Focus on food

By sinking all of her energy into controlling her body, an anorexic avoids dealing with such problems as parents, the future, and her sexuality. If she has low self-esteem, she is particularly vulnerable. Her disciplined dieting makes her feel special—particularly when others begin to notice.

Anorexia nervosa also may serve as a smoke screen for problems within the family. Dr. Ronald Liebman, Professor of Child Psychiatry and Pediatrics at the University of Pennsylvania School of Medicine, notes that the anorexic

may be a convenient scapegoat for the family. While the family focuses on the anorexic and her problems, marital, sibling, and other family concerns remain buried.

How can you recognize it?

The following behavior and physical changes in a child may signal anorexia nervosa:

- **Extreme weight loss.** A weight loss of at least 25 percent of "prediet" body weight is one of the diagnostic criteria for anorexia nervosa, but some women develop the syndrome after losing 15-20 percent.

- **Compulsive and excessive exercise.** Anorexics seem to be "on the go" constantly. Exercise becomes an obsession—a way to burn calories.

- **Unusual eating habits.** A young woman may deny that she is hungry and develop peculiar eating rituals such as eating only certain foods or

continued
 Photograph: Steve Nisport

ANOREXIA NERVOSA

continued

painstakingly cutting food into small pieces.

- Heightened interest in food and cooking. An anorexic may spend hours reading cookbooks and collecting recipes. She frequently will take over the meal planning for a household and cook elaborate dinners, all the while denying herself the food she prepares.

- Preoccupation with dieting and calorie counting. The anorexic is an expert on calories. She may distinguish "good foods" from "bad foods," based on number of calories, and become extremely upset if forced to eat something she considers "forbidden."

- Obsession with body weight. An anorexic's moods are ruled by the bathroom scale. As long as she continues to lose weight, she feels secure. Although thin, she frequently complains of feeling "fat." To verify her size, she may weigh herself and try on clothes daily.

- Amenorrhea. Researchers suspect that a combination of anorexia-related factors, particularly hormonal disturbances, cause amenorrhea—cessation

or absence of menstrual periods.

- Withdrawal from others. The anorexic begins to avoid social situations, particularly if they involve eating.

- Other physical symptoms. Starvation causes insomnia, constipation, dry skin, hair loss, weak and brittle nails, and a feeling of always being cold. Fine, soft hair may begin to grow on the skin.

Starving and binging

Anorexics fall into two classifications, says Dr. Yager: restricters and bulimic anorexics. Restricters don't binge or purge, but severely limit their food intake. They are usually more organized and rigid, and show less emotion. Bulimic anorexics, however, will starve themselves for a period of time and then binge-eat. They tend to be more impulsive and display more suicidal and self-destructive tendencies.

No easy solution

Anorexia nervosa can be fatal: The mortality rate is 5-15 percent (estimates vary). The condition is difficult to treat, partly because the anorexic—

at least at the outset—often denies that anything is wrong.

There is no single "cure" for anorexia nervosa. Treatment must be tailored to each case. Psychotherapy is recommended, both for the anorexic and—if she is a younger teen—for the family. Self-help groups also may be useful.

No medication specifically helps an anorexic. What a starver needs most is food. Hospitalization may be ordered if a person is severely malnourished. Because such problems as poor concentration and anxiety are made worse by starvation, a certain amount of weight gain may be necessary before effective psychotherapy can begin.

Families can help

Dr. Liebman stresses the importance of including the family in therapy, noting that certain behavioral patterns in the family must change for the anorexic to get well. If a difficult home situation does not change, a girl is more likely to return to her anorexic ways.

Dr. Yager recommends an honest, *continued*

may now be emerging as eating disorders.

When a young woman begins losing weight, family and friends compliment her on her more slender appearance. But because chemical changes occur in the body that make a dieter feel good, she doesn't stop dieting. These physical and psychological changes have an addictive quality. The anorexic continues to lose weight, even though she becomes unattractive by anyone's standards.

Unless a person has high blood pressure, diabetes, or high serum lipid or cholesterol levels, says Dr. Yager, it is actually healthier to be somewhat *overweight* than underweight. Other leading medical authorities agree.

For more information write or call these organizations:

- American Anorexia/Bulimia Association, Inc., 133 Cedar Lane, Teaneck, NJ 07666; 201/836-1800. For an information packet, send \$1 and a business-size self-addressed envelope bearing 56 cents postage.

- National Anorexic Aid Society, Inc. (NAAS), 550 S. Cleveland Ave., Suite F, Westerville, OH 43081; 614/895-2009. For information, send \$1 and a business-size self-addressed envelope bearing 39 cents postage.

- National Association of Anorexia Nervosa and Associated Disorders (ANAD), P.O. Box 271, Highland Park, IL 60035; 312/831-3438. Send \$1 for an information packet.

- Anorexia Nervosa and Related Eating Disorders (ANRED), P.O. Box 5102, Eugene, OR 97405; 503/344-1144. For information, send a business-size self-addressed envelope bearing 39 cents postage. ☐

ANOREXIA NERVOSA

continued

but firm approach on the part of the parents. He cautions, however, against becoming angry with the anorexic. "The most destructive thing that can occur is for a parent to be a constant criticizer," he says. "The more angry and undercutting the parents, the worse the outcome of the disease."

An anorexic must realize that she cannot control the lives of those around her, says Dr. Yager. Parents need to set limits concerning what they will and will not tolerate. Although it will be difficult, parents should not cave in to their daughter's unrealistic demands for fear of upsetting her or making her worse.

Act quickly

If you suspect your child is anorexic, seek help immediately from a pediatrician, internist, or other professional familiar with eating disorders. Don't assume that the situation will go away on its own. The sooner anorexia nervosa is diagnosed and treated, the better the chances of a recovery; food rituals and obsessive thinking will be less ingrained.

In pursuit of thinness

Because the "ideal American woman" is much slimmer than she was in the past, women are more likely to worry about their weight. Since 1960, Playboy bunnies, fashion models, Miss Americas—even First Ladies—have all become thinner. Dr. Yager notes that emotional problems which formerly surfaced as hysteria, paralysis, and invalidism,

TEXTS ANNEXED IN PART I

Exercise 2

1. Susan Dentzer with Peter McKillop, "Hot Line on the Hot Seat," Newsweek, 28 July 1986, p. 46.
2. Robin Knight, "A Roll of the Political Dice," U.S. News and World Report, 5 May 1986, p. 32.
3. David Gardner, "America's School System Still 'at risk'," U.S. News and World Report, 5 May 1986, p. 64.

Exercise 3

1. "Perhaps the Worst, Not the First," Time, 12 May 1986, p. 50.
2. "God in Gorbachev's backyard," The Economist, 12 April 1986, pp. 53-54.
3. U. S. Committee for Energy Awareness, "NUCLEAR ENERGY. Is America being left behind?," Time, 14 April 1986, p. 93.
4. Jamie Murphy, "Dodging Celestial Garbage," Time, 21 May 1984, p. 78.
5. "When the bullets start to fly," The Economist 12 April 1986, p. 38.
6. John Greenwald, "Poor Little Energy-Rich Kids," Time 14 April 1986, pp. 75-76.
7. Carolyn A. McNurlen, "ANOREXIA NERVOSA," Better Homes and Gardens, May 1986, pp. 65-68.

STUDENT EXERCISES: PART II

THE IMPORTANCE OF GUESSING

Part II: The Importance of Guessing

Teacher: Part II will focus on contextual guessing, that is, using the surrounding context of a word or phrase to help determine its meaning. Contextual guessing is a necessary reading skill for a second or foreign language reader and should be practiced from the start. To understand a text, a reader needs to put everything he or she knows about English, the topic of the text, and the world together to try to figure out meaning. It becomes cumbersome, if not impossible, for non-native readers to look up every unknown word in a dictionary, so a reader needs to develop the ability to guess a word's meaning using various contextual clues.

Three aspects of contextual guessing will be explored:

1) context clues, 2) simple punctuation and, 3) connectives.

Exercise 1: At The Birthday Tofume

- Objectives:**
1. To illustrate the importance of contextual guessing.
 2. To isolate various systematic means of guessing contextually.
 3. To serve as an introduction to intensive reading.

Teacher: Distribute "At The Birthday Tofume" and its corresponding worksheet to students in pairs or in small groups. Have students read the text and define (in English) the nonsense words throughout the text. Students should be encouraged to check and recheck their hypotheses regarding meanings of words to be sure that their guesses are plausible in the context of the entire text. Be sure to ask students how they arrived at their decisions. In discussing how they came to their definitions, students can confirm when their strategies worked and what went wrong when they did not.

In some instances, several definitions could be accepted as correct. It should be emphasized that exactness is not always necessary. Sometimes a general notion of a word is quite sufficient. Students should not get stuck trying to figure out the exact meaning of one word.

Exercise 1: At The Birthday Tofume

Students: Read the following story. Then, from contextual clues, guess the meanings of the nonsense words indicated at the end of the story. If you can, indicate if the word is a noun, verb or an adjective. Be sure you can explain why you came to your decisions!

At The Birthday Tofume

It's 9 P.M. Zobran night and it's Paul's birthday tofume. Paul is 21 today! The tofume is at Paul's girlfriend's chim and most everyone is in the zilim. Tim and Steve are smerging about the Giant's baseball game. Fran and Paul are smerging and locting. They're both locting rum and Coke.

The music is good and some people are foodling, others are just talling to the good music. Some friends are in the band that's zopping. They're zopping old rock and roll now. Dave zops guitar, Willy zops the flozums and Maxine zops the piano and sings.

There are some people in the phylim, nurgling. There are chips and sandwiches to nurgle. Fran's little brothers are quietly timming T.V. in their lonlim.

It's a great tofume and everyone is phump.

Guess the meaning of the nonsense words.

- | | |
|-------------------|---------------------------|
| 1. tofume _____ | 9. foodling _____ |
| 2. Zobran _____ | 10. talling _____ |
| 3. chim _____ | 11. zopping _____ |
| 4. smerging _____ | 12. zops _____ |
| 5. locting _____ | 13. flozums _____ |
| 6. zilim _____ | 14. nurgle/nurgling _____ |
| 7. pylim _____ | 15. timming _____ |
| 8. lonlim _____ | 16. phump _____ |

Exercise 2: Toblunik Pie

- Objectives:**
1. To illustrate the importance of contextual guessing.
 2. To discover various systematic ways of guessing contextually.
 3. To serve as an introduction to intensive reading.

Teacher: Distribute the recipe for "Toblunik Pie" to the students individually, in pairs or in small groups. Students should read the recipe and use contextual clues to discover the meaning of the nonsense words and the new English words. The students are asked to define (in English) the nonsense words and then to match the English expressions with the pictures found at the end of the recipe.

Be sure that the students can justify how they arrived at their decisions. It can be helpful for the students to focus on whether a word functions as a noun, verb, adjective, et cetera.

Variation of Exercise 2: Ask students to act out the recipe. Students should mime the different steps of the recipe as one student reads the instructions out loud.

Exercise 2: Toblunik Pie

Students: Read the following recipe. Then, from contextual clues, guess the meanings of the nonsense words indicated at the end of the exercise. Next, match the English expressions with the appropriate picture. Be sure you can explain how you came to your decisions.

TOBLUNIK PIE

I. The Lupint

2 cups zlip

2 sticks of baflitch

1/4 cup flump

2 rotelums

4-5 tablespoons ice cold abafu

1/2 teaspoon porfing powder

a few drops of neva

Put the zlip, flump and the porfing powder together in a large bliffing bowl and bliff well.

Melt the 2 sticks of baflitch over low heat. Add to the bliffiture of zlip, flump and porfing powder. Bliff with an electric bliffer until creamy. Pour in a few drops of neva.

Add the 2 rotelums to the bliffture. Bliff together well.
Add the abafu to make the bliffture soft and easy to work with.

Divide the lupint in half. Zlip the rolling pin and table top so the lupint doesn't stick when you roll it out. Roll out each half of the lupint into 2 uniformly thin circle-shapes the size of a 9" pie plate. Carefully pick up one circle of lupint and cover the bottom of a baflichted pie plate. Cut off excess lupint around the edge of the pie plate.

II. Toblunik Plast

6 tobluniks (they can be red or green, but they should be hard)
1 cup flump
2 teaspoons zlip
Cinnamon, cloves and nutmeg to taste

Peel the tobluniks and cut them in slices. Slowly bliff together all the ingredients. Fill the pie plate with the plast. Cover the plast with the remaining lupint. Cut off the extra lupint around the edge of the pie. With your fingers, pinch the two lupints together around the edge of the pie. Make decorative cuts in the top of the lupint to let the vapor escape.

Porf the pie in the tarno at 350 F. for 35-45 drafibles.

Exercise 2-A: Toblunik Pie

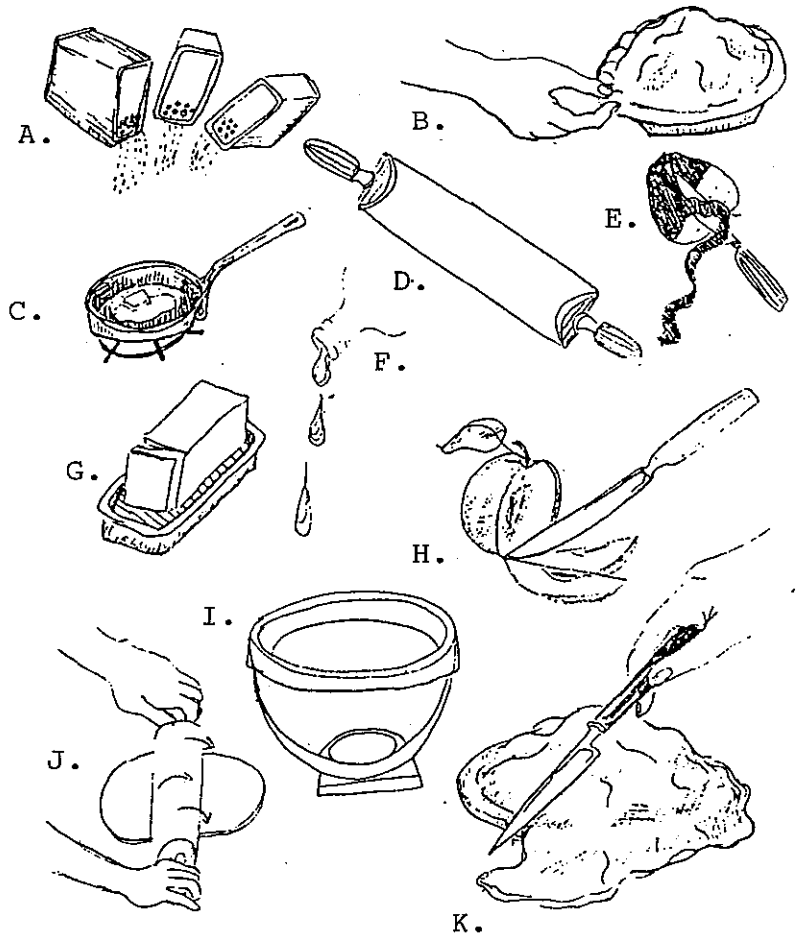
Students: Guess the meaning of the following nonsense words.

- | | |
|------------------------------|-----------------------------------|
| 1. lupint _____ | 8. bliff/bliffing/bliffture _____ |
| 2. zlip/zlipped _____ | |
| 3. Baflitch/baflitched _____ | 9. plast _____ |
| 4. flump _____ | 10. tabluniks _____ |
| 5. rotelums _____ | 11. tarno _____ |
| 6. abafu _____ | 12. drafibles _____ |
| 7. porf/porfing _____ | |

Exercise 2-B: Toblunik Pie

Students: Match the English word or expression with the picture that best describes it. Refer back to the recipe if necessary.

1. stick
2. a few drops
3. bowl
4. melt
5. roll
6. rolling pin
7. cut in slices
8. peel
9. cinnamon, cloves, nutmeg
10. cut around the edge of the pie
11. pinch



Exercise 3: Sentence Structure

- Objectives:**
1. To point out a basic English sentence pattern.
 2. To further introduce readers to beginning intensive reading.
 3. To further expose readers to determining meaning via syntactic clues.

Teacher: An aid in developing the ability to guess word meanings is to use sentence structure. Often knowing the function of a word in a sentence can help you determine its meaning. For instance, if you know a word functions as a verb or an adjective in a sentence, its possible meanings are narrowed down. This first exercise illustrates the basic Subject + Verb + Complement structure of sentences and gives the students practice in dividing sentences into that structure.

Following the example, students are to divide the sentences into Subject + Verb + Complement pattern. Be sure that students can justify how they came to their decisions. Go through the process with them in one or two examples. Review students' results with the class as a whole.

Exercise 3: Sentence Structure

Students: Study the example and divide the following sentences into the Subject + Verb + Complement pattern. From the context, try to guess the meaning of key words you do not understand.

EXAMPLE

People power in the Philippines brings a long-overdue change.
subject verb complement

1. Corporations are fighting to hold down rocketing medical costs.
2. U.S. companies spend about \$91 billion each year to provide health insurance for their workers, and the price is high.
3. Businesses are starting crash programs to cut costs without sacrificing quality of care.
4. Canon unveils a computerized still camera that may make conventional equipment obsolete.
5. South Africa tensely marks the tenth anniversary of the Soweto riots.

6. Millions of blacks observe the day with job boycotts, slowdowns and prayers.
7. More and more governments are considering tough economic sanctions.
8. Nature, novels and nostalgia provide a shelf of summer reading.

Exercise 4: Adjective-Noun Word Order

- Objectives:**
1. To familiarize readers with the adjective-noun word order in English sentences.
 2. To give students practice in identifying adjectives and nouns in sentences.
 3. To give students further practice in beginning intensive reading and determining meaning through syntactic clues.

Teacher: Adjectives precede the noun in most English sentences. This knowledge can be helpful to readers in determining if a word is crucial to the general meaning of the sentence.

Distribute the exercise to the students individually, in pairs or groups. Students should study the example and then try to find the adjectives and nouns they describe in the sentences that follow.

Review students' answers with the class as a whole.

Exercise 4: Adjective-Noun Word Order

Students: Look at the example and read the explanation. Then determine the noun(s) and adjective(s) in each sentence. Also consider whether or not the adjectives have an important function in the sentence.

EXAMPLE

Tropical fruits decorate the huge table.
adj. noun adj. noun

In this sentence the word "tropical" is the adjective that describes the noun "fruits". It tells you what kind of fruits are being discussed. The same is true for the adjective "huge", which tells you what kind of table is being discussed. Here, the adjectives give important information to the reader, and can even help the reader induce the meaning of the verb "decorate", if it is unknown to the reader.

1. We put the whole world in your hand.

Adjectives(s) _____

Noun(s) _____

2. The biggest stars burn and rage as they die.

Adjectives(s) _____

Noun(s) _____

3. Their far-flung remains may foretell the next celestial explosion.
Adjectives(s) _____
Noun(s) _____
4. A poignant, fiercely funny debut has opened downtown.
Adjectives(s) _____
Noun(s) _____
5. As a German citizen, I am ashamed of the reaction of many European governments to the justified American attack on Libya.
Adjectives(s) _____
Noun(s) _____
6. Genetic engineers are staging a beneficial agricultural revolution.
Adjectives(s) _____
Noun(s) _____
7. Deeply ingrained prejudices have made even the idea of coexistence a delicate proposition.
Adjectives(s) _____
Noun(s) _____
8. Thousands of ordinary American and French people paid for the construction of the Statue of Liberty.
Adjectives(s) _____
Noun(s) _____

9. Critics say the costly program has suffered from inept management.

Adjectives(s) _____

Noun(s) _____

10. Five students complained of the old, dictator-like teacher's grading system.

Adjectives(s) _____

Noun(s) _____

Exercise 5: Simple Punctuation

- Objectives:**
1. To familiarize readers with three types of punctuation and their functions.
 2. To alert readers to punctuation as an aid in determining meaning.

Teacher: Punctuation can signal added information and alert the reader to the explanation of an unknown word or figure of speech.

Students can work individually, in pairs or in groups. Review results with the class as a whole and be sure to question the reasoning behind your students' decisions.

Exercise 5: Simple Punctuation

Students: Look at the use of the dash (--); the colon (:); and parentheses ((...)) in the following sentences. Indicate what kind of punctuation is used in each sentence and circle how the additional information functioned in the sentence.

1. More than just spectacular light shows, supernovas have probably created some of the most exciting objects in the universe--neutron stars and black holes.

<u>Type of Punctuation</u>	<u>Definition/Explanation</u> <u>Function</u>
----------------------------	--

2. The lighter an airplane is, the farther it can go or the more it can carry. The problem: How to reduce weight while maintaining strength. Our solution: Use light-weight, high strength carbon fibers.

<u>Type of Punctuation</u>	<u>Definition/Explanation</u> <u>Function</u>
----------------------------	--

3. The new regulation will have the following effects:

- o The pregnant teen-ager will not seek early prenatal care.
- o She will not receive health education, nutritional counseling, accessibility to the Federal women-infants-children program and social services.
- o Medical problems, such as diabetes, cardiac dysfunction, sexually transmitted diseases (herpes, chlamydia, syphilis or gonorrhea) will not be detected.
- o The probability of giving birth to an infant who requires long-term care in a neonatal intensive-care unit will be greatly increased.
- o Fetal mortality, neonatal mortality and morbidity (birth defects, mental retardation) will all increase.

<u>Type of Punctuation</u>	<u>Definition/Explanation</u> <u>Function</u>
----------------------------	--

<u>Type of Punctuation</u>	<u>Definition/Explanation</u> <u>Function</u>
----------------------------	--

4. Forty-year-old Mark's business was collapsing, and his marriage was headed for the rocks. But a friend had just the thing for him: cocaine. Mark liked it.

<u>Type of Punctuation</u>	<u>Definition/Explanation</u> <u>Function</u>
----------------------------	--

5. Why is it helpful to notice punctuation in a sentence?

Exercise 6: Simple Punctuation

- Objectives:**
1. To familiarize readers with three types of punctuation and how they are used in sentences.
 2. To alert readers to punctuation as an aid in determining meaning.
 3. To alert readers to necessary or superfluous information signaled by punctuation.

Teacher: These exercises give readers further practice in how punctuation can be used as an aid in reading comprehension.

Distribute the exercise to students individually, in pairs, or in groups. Go over their answers with the class as a whole.

Exercise 6: Simple Punctuation

Students: Look at the use of the dash (--); the colon (:); and parentheses ((...)) in the following sentences. Indicate what kind of punctuation is used in each sentence and circle how the additional information functioned in the sentence.

1. Of the ancient writing systems, the Maya hieroglyphics have proved to be the most difficult to crack. Linguists have never had the benefit of a key like the Rosetta stone (a stone inscribed with parallel texts in Egyptian hieroglyphs and Greek, which gave Champollion the first clue to deciphering the Egyptian glyphs), and by the 1960s had come to believe that the hieroglyphs were were not a writing system at all.

<u>Type of Punctuation</u>	<u>Definition/Explanation</u> Function
----------------------------	---

2. The Mayas also wrote books on folded bark concerning historical, mythological, religious, astronomical, and mathematical matters (only four books have survived), and used their astronomical skills to link earthly events to those of the universe.

<u>Type of Punctuation</u>	<u>Definition/Explanation</u> Function
----------------------------	---

3. Archeologists in the 1920s found skulls of Homo erectus--the hominid who was supplanted by Homo sapiens about 300,000 years ago--along with bones of deer, rhinos, and many other animals.

<u>Type of Punctuation</u>	<u>Definition/Explanation</u> Function
----------------------------	---

4. The North Face of Mt. Everest, which Roger Marshall, inset, plans to climb alone this week, without bottled oxygen or even a rope. His solo venture exemplifies the daring new trend in mountaineering: superalpinism.

<u>Type of Punctuation</u>	<u>Definition/Explanation</u> Function
----------------------------	---

5. In Japan and Iceland, the countries with the longest life expectancies, people can hope to live until age 77. Scandinavians and Americans generally check out at 75 (with women outliving men by about six years). Such longevity is usually attributed to good nutrition, medical care, and sanitation--all benefits of an affluent society. Afghanistan is among the countries with poorest health: one child in five does not survive, and life expectancy for the survivors is about 37.

<u>Type of Punctuation</u>	<u>Definition/Explanation</u> <u>Function</u>
<u>Type of Punctuation</u>	<u>Definition/Explanation</u> <u>Function</u>
<u>Type of Punctuation</u>	<u>Definition/Explanation</u> <u>Function</u>

Exercise 7: Connectives

- Objectives:**
1. To signal the use of simple connectives (and, but, however) as aids in reading comprehension.
 2. To familiarize readers with the function of these connectives.

Teacher: This is the first (and easiest) of a series of exercises on connectives. Connectives are words that connect ideas. They might contrast or give cause, clarification, examples, et cetera. By so doing, connectives can aid the reader in comprehending words and concepts in a text.

Distribute the exercise to students individually, in pairs, or in groups. Students should identify the simple connectives used in the texts and decide how they function in the sentence (to contrast, add information or give alternatives).

Exercise 7: Connectives

Students: Look at the texts below and identify the connectives. Then circle their functions (to contrast, add information or give an alternative).

1. Tracy decides to escape to Brazil disguised as Tina, but Clint catches up with her at the airport.

	Contrast/Add Information/Give Alternative
Connective	Function

2. Zona is shot to death by Lorna, who says the shooting was an accident. However, evidence mounts against Lorna.

	Contrast/Add Information/Give Alternative
Connective	Function

3.



	Contrast/Add Information/Give Alternative
Connective	Function

4. Mark couldn't stop cocaine on his own or even with counseling. But medication helped him kick his habit, and now he's putting his life back together.

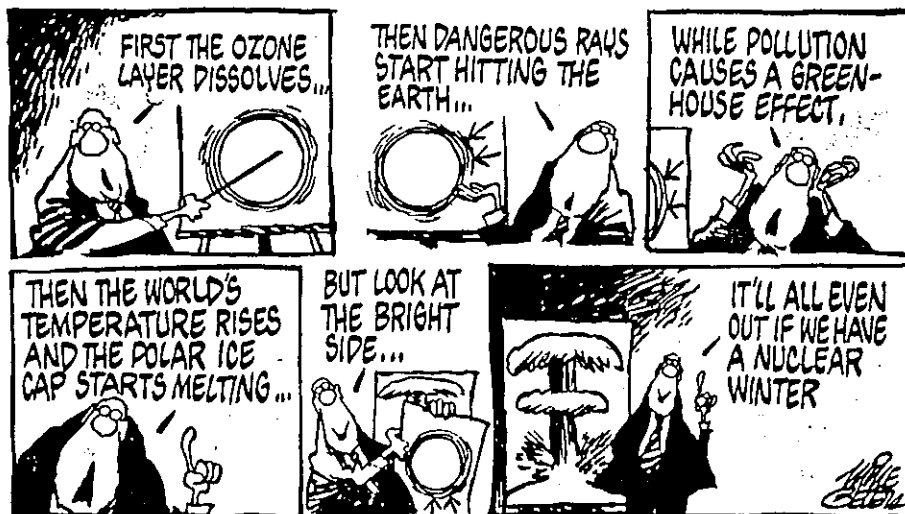
Connective

Contrast/Add Information/Give Alternative
Function

Connective

Contrast/Add Information/Give Alternative
Function

5.



© 1986 MIKE PETERS—DAYTON DAILY NEWS

Connective

Contrast/Add Information/Give Alternative
Function

Exercise 8: Connectives

- Objectives:**
1. To acquaint the reader with a variety of connectives and their functions.
 2. To help the reader discover how connectives can aid in clarifying concepts in texts.
 3. To serve as an introduction to intensive reading.

Teacher: These are difficult exercises. Students may need a more detailed explanation of connectives than that given in order to facilitate the completion of the exercises devoted to connectives and their function (exercises 8-9).

The students must identify connectives and be aware of their function in order to understand the passages. The functions are limited to: 1) adding or 2) contrasting information and 3) giving alternatives. Since the exercises are difficult, it is helpful for the students to work in pairs or in groups. The students will become familiar with many connectives that have the above mentioned functions.

Review the results of the exercises with the class as a whole and be sure to check that the students have understood what concepts are added to or contrasted, et cetera.

Exercise 8: Connectives

Students: This exercise is difficult. The texts are long and there may be several connectives in one text. The connectives in any text may have different functions. Underline the connectives in each text and circle their functions. When the connective indicates a contrast of ideas, be sure you understand what is being contrasted.

1. Only about half a dozen of the computers now exist--all built by researchers. Yet they may soon come into common use.

<u> </u>	<u>Contrast/Add Information/Give Alternative</u>
Connective	Function

2. While forecasters may have to wait several years to benefit completely from this advanced technology, one new instrument is starting to help them now.

<u> </u>	<u>Contrast/Add Information/Give Alternative</u>
Connective	Function

3. It is often argued that today's immigrants are "much more distant in culture, religion, race and ethnicity than the immigrants of the early 1900's," Mr. Glazer said at a symposium last week at the Brooklyn campus of Long Island University. In reality, though, immigrants of that period faced many of the same accusations, he said.

<u> </u>	<u>Contrast/Add Information/Give Alternative</u>
Connective	Function

<u> </u>	<u>Contrast/Add Information/Give Alternative</u>
Connective	Function

4. Although the performance differences are mostly due to men's larger size, there is still a difference that size alone cannot account for. This difference exists because until recently, young girls were not encouraged to participate in sports.

Connective Contrast/Add Information/Give Alternative Function

5. I must respond to Freeman Dyson's "Space Butterflies" (November). I agree with him regarding the importance of modest, exploratory space missions, but his supporting arguments are both misleading and incorrect. Furthermore, scaling down NASA's major missions, as he suggests, could seriously impair the future of science in the U.S.

Connective Contrast/Add Information/Give Alternative Function

Connective Contrast/Add Information/Give Alternative Function

Connective Contrast/Add Information/Give Alternative Function

6. While it is true that important discoveries have been made with modest instruments, the bulk of our knowledge in astronomy has emerged from major observations.

Connective Contrast/Add Information/Give Alternative Function

7. Besides cost and vulnerability, fabric is a terrible insulator; a single layer is about as effective as no insulation at all. There is, however, a new and inexpensive kind of fabric roof that is quite energy-efficient.

Connective Contrast/Add Information/Give Alternative Function

Connective Contrast/Add Information/Give Alternative Function

8. Despite his apparent interest in the Maya's writings, de Landa was also responsible for the destruction of many of their remaining books in an auto de fe in 1562.

<u>Connective</u>	<u>Contrast/Add Information/Give Alternative Function</u>
-------------------	---

9. Morse code was created by Samuel F.B. Morse and his assistant Alfred Vail in 1835 for overland telegraph. Though today the marine system conveys little beyond mundane arrival times and supply requests, it was once the only reliable receiver of SOS signals.

<u>Connective</u>	<u>Contrast/Add Information/Give Alternative Function</u>
-------------------	---

10. Even though two years or more had elapsed since the breakdown of the marriages, she found that many parents still seemed so overwhelmed with their own problems and needs that their children could not depend upon them for normal physical care, for emotional support and discipline, or simply just to "be there."

<u>Connective</u>	<u>Contrast/Add Information/Give Alternative Function</u>
-------------------	---

<u>Connective</u>	<u>Contrast/Add Information/Give Alternative Function</u>
-------------------	---

<u>Connective</u>	<u>Contrast/Add Information/Give Alternative Function</u>
-------------------	---

Exercise 9: Contrastive Connectives

- Objectives:**
1. To familiarize readers with various contrastive connectives.
 2. To alert readers to connectives as aids in comprehension.
 3. To serve as an introduction to intensive reading.

Teacher: These exercises are difficult because the reader not only has to identify the contrastive connectives in the passages, but also identify the contrasted ideas and express those ideas in written English.

Since they are difficult exercises, it is helpful for the readers to work in pairs or in groups. Review the results of the exercises with the class as a whole.

Exercise 9: Contrastive Connectives

Students: This exercise is difficult. Find the contrastive connectives and underline them. Then briefly, in your own words, write the ideas that are contrasted.

1. Many poor children will defy the odds and--through initiative, good parenting or an encounter with an extraordinary teacher--find their own passport out of poverty. But they are the exceptions: most children who are poor will find life hard before they've had the chance to experience it.

Contrasted Ideas _____

2. It is essentially impossible to predict exactly what is going to happen in the future, except in the simplest systems. However, there are several general principles of physics that allow us to predict with a high degree of reliability what is not going to happen in the future.

Contrasted Ideas _____

3. Until last November, Tanzania had been ruled throughout its 25-year independence by Julius Nyerere, who, like his literate but poor nation, was a study in contrasts. He never glorified the military, committed blatant human rights abuses, or looted the public treasury for his own enrichment. On the other hand, he made a shambles of the country's economy.

Contrasted Ideas _____

4. African mothers generally nurse their children until up to two years of age, which has the side effect of limiting conception. Nevertheless, millions of infants in developing countries--some 200,000 six- to 12-month olds in Tanzania alone--are indeed malnourished.

Contrasted Ideas _____

5. While the nation has lifted millions of American adults out of poverty in the past two decades, millions of children have been born, or have fallen, into it.

Contrasted Ideas _____

6. While some of the differences are due to time constraints --woman have usually trained at least five years less than men because their sport is newer--a woman's muscles just don't respond to training the way a man's do.

Contrasted Ideas _____

7. Gloom has been so common in the Third World for the past five years that few people have noticed the first hint of a reason for a smile. Nonetheless, economic prospects for the nearly 4 billion people in developing countries are starting to brighten.

Contrasted Ideas _____

TEXT EXCERPTS - PART II

Exercise 5

1. Ellen Fried, "The Ungentle Death of a Giant Star," Science 86, Jan-Feb 1986, p. 61.
2. Advertisement, Newsweek, 2 June 1986, p. 7.
3. R. Kresky, M.D., "Correspondence: Pregnant Teenagers," New York Times, 28 July 1986, p. 14.
4. R. Wilbur, "A Drug to Fight Cocaine," Science 86, March 1986, p. 42.

Exercise 6

1. David Stuart, "The Lost Language of Coba", Science 86, March 1986, p. 49.
2. Ibid.
3. "The Successful Animal," Science 86, Jan-Feb 1986, p. 13.
4. "Cave Life Revisited," Science 86, Jan-Feb 1986, p. 6.
5. Trip Gabriel, "One Man vs Everest," New York Times Magazine, 10 August 1986, p. 21.

Exercise 7

1. "Soap Opera Digest," Television, Marin Independent Journal, 29 March 1986, p. 33.
2. Robert Wilbur, "A Drug to Fight Cocaine," Science 86, March 1986, p. 43.
3. Cartoon, Newsweek, 14 April 1986, p. 37.
4. "Soap Opera Digest," Television, Marin Independent Journal, 29 March 1986, p. 33.
5. Cartoon, Marin Independent Journal, 23 August 1986, p. 7.

Exercise 8

1. J. Alper, "Mostly Sunny and Cooler," Science 86, Jan-Feb 1986, p. 66.
2. Ibid.
3. Larry Rohter, "Scholar Finds Few Changes in Immigrants," New York Times, 28 July 1986, p. 10.
4. B. Hammer, "Women Body Builders: Is Bigger Better," Science 86, March 1986, p. 75.
5. Charles Hargreaves, Correspondence, Science 86, Jan-Feb 1986, p. 12
6. Ibid.
7. D. Stewart, "Tented Skylines," Science 86, March 1986, p. 52.
8. David Stuart, "The Lost Language of Coba", Science 86, March 1986, p. 49.
9. K. Murphy, "Mayday for Morse Code," Science 86, Jan-Feb 1986, p. 66.
10. A. Brooks, "Divorced Parents and the Neglected Child," New York Times, 28 July 1986, p. 16, col. 2.

Exercise 9

1. N. Karlen, "Homeless Kids: Forgotten Faces," Newsweek, 2 June 1986, p. 20.
2. Alan Lightman, "A Last Visit From Papa Joe," Science 86, Jan-Feb 1986, p. 16.
3. Greg Easterbrook, "A Feeding Machine," Science 86, Jan-Feb 1986, p. 48.
4. Greg Easterbrook, p. 49.
5. N. Karlen, "Homeless Kids: Forgotten Faces," Newsweek, 2 June 1986, p. 21.
6. B. Hammer, "Women Body Builders: Is Bigger Better," Science 86, March 1986, p. 75.
7. "The Third World Smiles," The Economist, 12 April 1986, p. 13.

STUDENT EXERCISES: PART III

DICTIONARY WORK

Part III: Dictionary Work

Teacher: This part of the material explores the dictionary. Most readers use dictionaries, as much as teachers try to encourage contextual guessing. For those instances when it is necessary to use one, it is essential that the reader use a dictionary effectively. These exercises are geared toward that goal.

Exercise 1: Getting to Know an Old Friend

Objectives: 1. To familiarize the reader with the information available in his or her dictionary.

2. To lead the reader toward effective use of the dictionary.

Teacher: Students will need their own dictionary for this exercise. Ask students to answer the questions on the following page. Review their answers with the class as a whole.

Exercise 1: Getting to Know an Old Friend

Students: How well do you know your dictionary? Looking in your own dictionary, answer the questions indicated below.

1. Look at the table of contents. How many divisions are there? _____
2. Does your dictionary have a section on spelling rules? _____
3. Does your dictionary have a section on punctuation? _____
Grammar? _____
4. Where do you look to know how to pronounce a word?

Does your dictionary have a pronunciation key? _____
Where? _____
5. Does your dictionary have a section on famous people? _____
Geographical locations? _____
6. Does your dictionary have any other special or interesting features? _____

Exercise 2: The Dictionary Entry

- Objectives:**
1. To familiarize the reader with various aspects of a dictionary entry.
 2. To lead the reader toward effective use of the dictionary.

Teacher: Distribute the exercise worksheet to students. This exercise can be done individually or in pairs. Review the students' results with the class as a whole.

Exercise 2: The Dictionary Entry

Students: Carefully look at the dictionary entry below. Then locate the different parts of the definition indicated beside the entry. Give several examples of each category when appropriate.

catch (kach) v. caught, catch-ing v.t. 1 To take, seize, or come upon, as something departing or fleeing; take captive; capture. 2 To entrap; ensnare. 3 To captivate, gain, or hold. 4 To apprehend or perceive clearly. 5 To surprise; detect, as in a misdeed. 6 To contract; incur, as a disease. 7 To arrive at or take, as a train or boat, just before its departure. 8 To arrest the motion of; entangle. 9 To grasp and retain. 10 To perceive, as something fleeting, with momentary distinction; to catch sight of. 11 To reach, as a person, with a blow: She caught him a box on the ear. — v.i. 12 To make a movement of grasping or seizing: He caught at the idea. 13 In baseball, to act as catcher. 14 To become entangled or fastened. 15 To be communicated or communicable, as a disease or enthusiasm. 16 To take fire; kindle; ignite. 17 Naut. To catch the wind: an elliptical expression. — to catch it Colloq. To receive a reprimand, scolding, drubbing, or the like. — to catch (one) napping To take off guard; outwit. — to catch on Colloq. 1 To understand. 2 To become popular or fashionable. — to catch out 1 In baseball, to put a batter out by catching the ball. 2 To discover (someone) in error. — to catch up 1 To overtake. 2 To regain by or as if by overtaking: to catch up on one's lessons. — to catch up with (or up to) To overtake. — n. 1 The act of catching; the act of grasping or seizing; specifically, the act of catching a batted or thrown ball before it reaches the ground, as in baseball, cricket, etc.; also a catcher. 2 A hold or grip, as in wrestling. 3 That which catches or fastens; a fastening. 4 That which is or may be caught or gained, such as a person or thing worth obtaining, as in marriage. 5 The amount of fish or the like caught at one time or in a given period. 6 The state in which or the extent to which a crop germinates. 7 An artful trick or question. 8 An impediment; a break, as in the voice or breathing. 9 Music A round; also, a scrap of song. — adj. Attracting or meant to attract notice; catchy; a catch phrase. [*<AF cachier <LL captiare, freq. of capere take, hold. Doublet of CHASE.*]

Synonyms (verb): apprehend, capture, clasp, clutch, comprehend, discover, ensnare, entrap, grasp, grip, gripe, overtake, secure, seize, snatch, take. To catch is to come up with or take possession of something departing, fugitive, or illusive. We catch a runaway horse, a flying ball, a mouse in a trap. To "catch at" is to attempt to catch, often unsuccessfully. We clutch with a swift, tenacious movement of the fingers; we grasp with a firm closure of the whole hand; we grip or gripe with the strongest muscular closure of the whole hand possible to exert. We clasp in the arms. We snatch with a quick, sudden, and usually a surprising motion. In the figurative sense, catch is used of any act that brings a person or thing into our power or possession; as, to catch a criminal in the act; to catch an idea, in the sense of apprehend or comprehend. Compare ARREST, GRASP. *Antonyms:* lose, miss, release, restore.

1. Antonyms _____
2. Inflected forms _____
3. Idiomatic phrase _____
4. Illustrative example _____
5. Syllabication _____
6. Usage label _____
7. Synonyms _____
8. Etymology _____
9. Part of speech _____
10. Pronunciation _____

Exercise 3: Choosing The Right Definition

- Objectives:**
1. To give the reader practice in using context to determine which dictionary definition is appropriate.
 2. To serve as an introduction to intensive reading.

Teacher: For this exercise the students will need their own English-English dictionaries. However, they can work individually, in pairs, or in small groups. They should find the part of speech and appropriate dictionary definition for each underlined word.

Review the students' results with the class as a whole, making sure that the students can justify how they came to their conclusions.

Exercise 3: Choosing The Right Definition

Students: Look at the sentences below and choose an appropriate definition of the underlined word from your dictionary. Indicate the part of speech of the word underlined. Be sure you can support your choices.

1. Renewable energy faces trying times.

Part of speech _____ Definition _____

2. Perhaps the longest strides have come in solar power.

Part of speech _____ Definition _____

3. The AIDS panic--why we can't afford to catch it.

Part of speech _____ Definition _____

4. Lately AIDS stands for hysteria, fear, ignorance and prejudice.

Part of speech _____ Definition _____

5. The new pipelines have been laid in record time across roads, bridges, tunnels and, in some stretches, under water.

Part of speech _____ Definition _____

6. The great gift commemorated a century of French-American relations and was to help spur France to restore liberty at home.

Part of speech _____ Definition _____

7. One example is Roberta's son Danny, a strapping, college-educated 34-year-old.

Part of speech _____ Definition _____

8. The opposition now sees faint signs of weakness in the dictator.

Part of speech _____ Definition _____

9. In the end, the President decided to stick with the treaty a while longer.

Part of speech _____ Definition _____

10. Two members are said to be worried that the Prussian-style old soldier's tyrannical ways threaten the institutions they head.

Part of speech _____ Definition _____

Exercise 4: Choosing The Right Definition

- Objectives:**
1. To give the reader practice in using contextual clues.
 2. To give the reader practice in choosing correct definitions.
 3. To serve as an introduction to intensive reading.

Teacher: The students will need their own dictionaries, however they can work in pairs or in small groups. Review the students' results, making sure that they can support their decisions.

Exercise 4: Choosing The Right Definition

Students: Read the sentences and try to guess the meaning of the underlined words from the context. Then try to choose the correct dictionary definitions and write it in the space provided below. Also indicate the part of speech of each word.

1. Prominent among the dissenters was Defense Secretary Caspar Weinberger, who urged that the accord be scrapped.
Part of speech _____ Definition _____

2. It's still possible for authorities to curb the movement of blacks.
Part of speech _____ Definition _____

3. Heat rose in shimmering waves over much of the South last week.
Part of speech _____ Definition _____

4. I didn't know if he was being serious or only kidding.
Part of speech _____ Definition _____

5. Sometimes it is important to listen to the grapevine.
Part of speech _____ Definition _____

6. Some people think that the society has become saddled with the high cost of prisons.

Part of speech _____ Definition _____

7. He dabbled in painting, horses and antiques.

Part of speech _____ Definition _____

8. Fred was lured out of retirement to open a new investment firm.

Part of speech _____ Definition _____

9. The country has embraced the newest fad diet.

Part of speech _____ Definition _____

10. Next week the candidate will air his complaints at the press conference.

Part of speech _____ Definition _____

TEXT EXCERPT - PART III

Exercise 2

1. Britannica World Language Dictionary Edition of Funk and Wagnalls Standard, New York: Funk & Wagnalls Co., 1975.

STUDENT EXERCISES: PART IV

PUTTING IT TOGETHER

Part IV: Putting It Together

Teacher: Skilled readers often read the first and last paragraphs of texts. This strategy can be useful, particularly in aiding the reader to decide if the text is pertinent to his or her needs. What is contained in these two paragraphs often provides enough information that only a quick reading of the article is necessary. Through the first and last paragraphs the reader can get a more detailed idea of the subject matter than that obtained from an initial extralinguistic approach to a text. Further insight can be gained if the introductory and concluding paragraphs present the author's point of view.

The exercises in Part IV emphasize getting the gist of a text and hypothesizing about its contents, rather than focusing on intensive reading.

The original format of the two initial articles in this section have been altered to present the reader with specific information in specific doses: first, visual elements; then, first and last paragraphs; and finally, topic sentences. However, the articles that follow are presented in their original form. The articles annexed have been chosen because they have exploitable introductory and concluding paragraphs and topic

sentences. Each article has an instruction sheet for the student.

It should be pointed out that not every text has introductory and concluding paragraphs, or topic sentences, but they can be aids to comprehension when they do occur.

Exercise 1: Inside Job

- Objectives:**
1. To alert the reader to the technique of reading the first and last paragraphs as an aid in comprehending a text.
 2. To alert the reader in hypothesizing about the content of an article.
 3. To give the reader practice in hypothesizing about the content of an article.
 4. To tie together the various strategies of reading comprehension that have been presented in this material.

Teacher: This exercise is presented in 4 phases (A through D). Review the students' results with the class as a whole after each phase.

Exercise 1-A (Phase 1): Inside Job

Teacher: Distribute the text that presents the key elements to individual students, pairs or small groups. Elicit as much information as possible from the minimal clues presented. Students should hypothesize about the contents of the text and discuss why they came to their conclusions. Then encourage the students to share any knowledge they have about the topic of the text. The exercises need not be written, but can be conducted orally.

Write the student instructions on the blackboard.

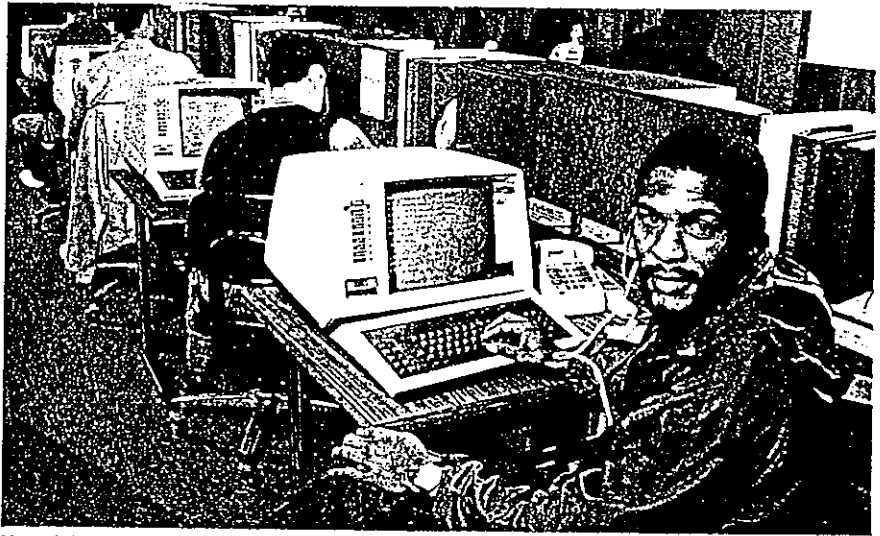
Students: Look at the text. What hypotheses can you form about the content of the article, basing your decision only on the information here?

Why?

Economy & Business

Inside Job

Cheery voices from behind bars



Now finishing a three-year sentence for robbery, inmate Rogers takes reservations for TWA
"It gives me an outlet so I don't have to get back into the same bad habits once I get out."

—By Gordon M. Henry,
Reported by Cristina Garcia/Los Angeles and
Andrea Sachs/New York

Exercise 1-B (Phase 2): Inside Job

Teacher: Distribute the second phase of the article that includes the introductory and concluding paragraphs. Students should quickly read the new information and confirm or change their hypotheses. Students can focus on connectives or punctuation that might be helpful, and make guesses about unknown vocabulary based on contextual clues.

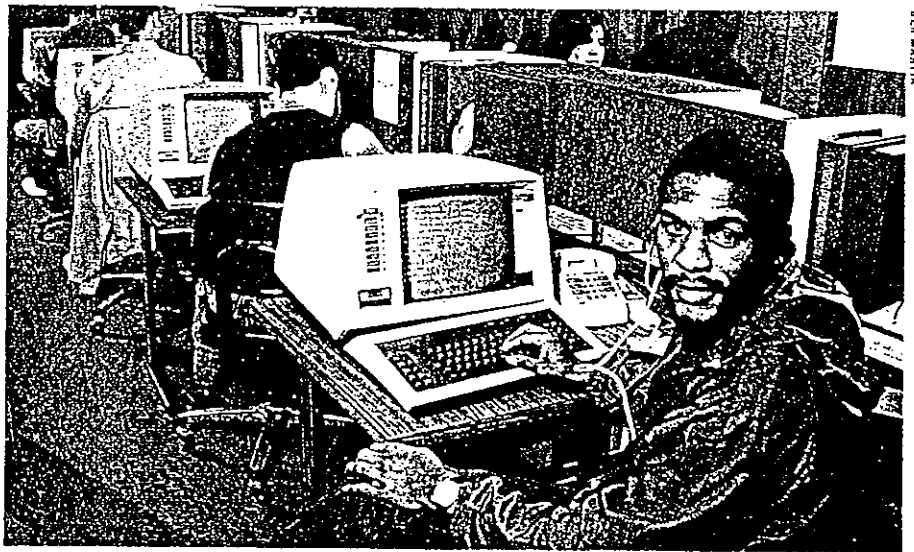
Write the student instructions on the blackboard.

Students: Now look at the text. What information has been added? Confirm your hypotheses or form new ones about the contents of the article, basing your decision only on the information presented here.

Inside Job

Cheery voices from behind bars

Prisoners have long earned their daily bread. In the 19th century, convicts at Sing Sing worked as blacksmiths and carpenters. More recently, inmates have manufactured license plates and toiled on chain gangs performing road repairs. Now, though, increasing numbers of prisoners are taking on a more refined line of work: answering telephone inquiries for corporate and government employers.



Now finishing a three-year sentence for robbery, Inmate Rogers takes reservations for TWA
"It gives me an outlet so I don't have to get back into the same bad habits once I get out."

Prisoners find their new jobs valuable not only as a source of income but as a way to develop a skill that could lead to future employment on the outside. Keith Rogers, 21, was convicted of robbery in 1982 and the following year began serving a three-year sentence at the Ventura School in Camarillo, Calif., a correctional institution for youthful offenders. In February he was one of 24 inmates who began taking phone reservations for TWA through a switchboard hooked up to three trailers at Ventura. Says Rogers: "This opportunity makes my future a little bit brighter. It gives me an outlet so I don't have to get back into the same bad habits once I get out."

—By Gordon M. Henry.
Reported by Cristina Garcia/Los Angeles and
Andrea Sachs/New York

Exercise 1-C (Phase 3): Inside Job

Teacher: Now distribute the article that includes topic sentences. Students should read the new information and confirm or alter their hypotheses about the contents of the text.

Write the student instructions on the blackboard.

Students: What information has been added to the text? Confirm or change your hypotheses about the content of the article, basing your guesses only on the information presented here.

Economy & Business

Inside Job

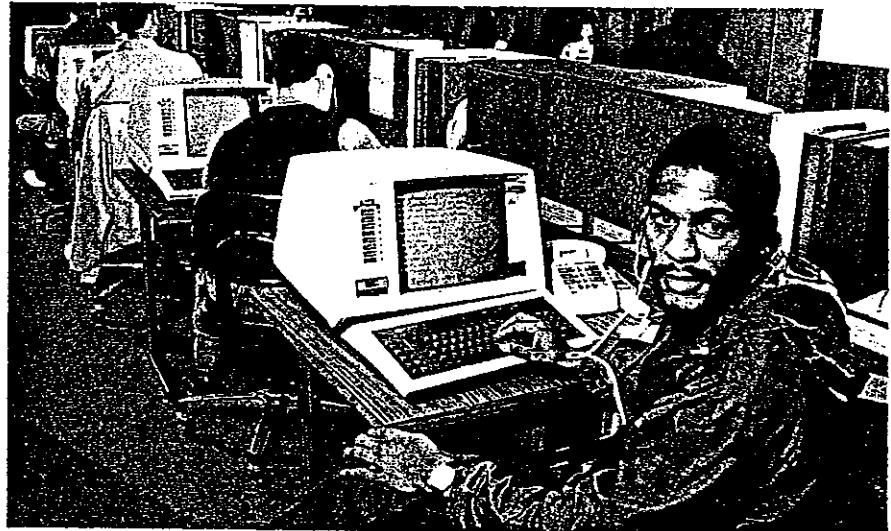
Cheery voices from behind bars

Prisoners have long earned their daily bread. In the 19th century, convicts at Sing Sing worked as blacksmiths and carpenters. More recently, inmates have manufactured license plates and toiled on chain gangs performing road repairs. Now, though, increasing numbers of prisoners are taking on a more refined line of work: answering telephone inquiries for corporate and government employers.

In New York City, the New York State Department of Motor Vehicles has for the past two months been channeling calls to a room in the Bayview Correctional Facility, a medium-security women's prison.

New York State's new answering service was patterned in part on a growing number of similar relationships between prisons and private companies.

Today 30 inmates answer phones for anywhere from 20 to 40 hours a week, handling about 5% of all calls to Best Western's toll-free number.



Now finishing a three-year sentence for robbery, inmate Rogers takes reservations for TWA
"It gives me an outlet so I don't have to get back into the same bad habits once I get out."

The program has already drawn criticism from labor leaders.

Prisoners find their new jobs valuable not only as a source of income but as a way to develop a skill that could lead to future employment on the outside. Keith Rogers, 21, was convicted of robbery in 1982 and the following year began serving a three-year sentence at the Ventura School in Camarillo, Calif., a correctional institution for youthful offenders. In February he was one of 24 inmates who began taking phone reservations for TWA through a switchboard hooked up to three trailers at Ventura. Says Rogers: "This opportunity makes my future a little bit brighter. It gives me an outlet so I don't have to get back into the same bad habits once I get out."

—By Gordon M. Henry.
Reported by Cristina Garcia/Los Angeles and
Andrea Sachs/New York

Exercise 1-D (Phase 4): Inside Job

Teacher: Students can be given the entire article to confirm their hypotheses. They can decide how much information was obtained in each of the three previous phases of the article.

Students should quickly read the entire article and answer the following questions.

- Students:**
1. Confirm or change your hypotheses about the contents by scanning the entire article.
 2. Were you able to come to correct hypotheses before reading the entire article?

At what phase?

3. Did this final reading of the article give you new or vital information?
4. Did the introductory and concluding paragraphs and topic sentences give you vital information?

Inside Job

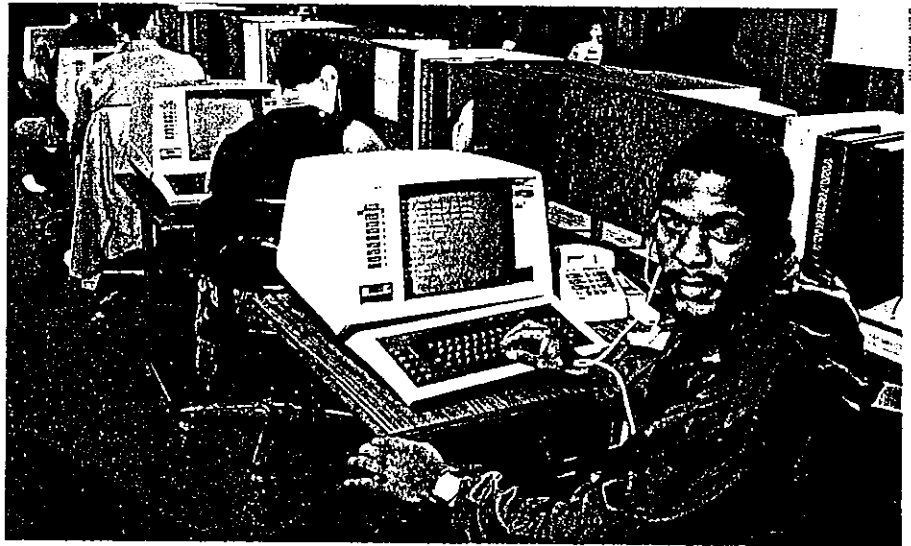
Cheery voices from behind bars

Prisoners have long earned their daily bread. In the 19th century, convicts at Sing Sing worked as blacksmiths and carpenters. More recently, inmates have manufactured license plates and toiled on chain gangs performing road repairs. Now, though, increasing numbers of prisoners are taking on a more refined line of work: answering telephone inquiries for corporate and government employers.

In New York City, the New York State Department of Motor Vehicles has for the past two months been channeling calls to a room in the Bayview Correctional Facility, a medium-security women's prison. The cheery voice that says, "Hello.

New York State's new answering service was patterned in part on a growing number of similar relationships between prisons and private companies. Correctional institutions in a total of ten states have taken on business partners. Since 1981, for example, the Best Western motel chain has employed inmates at the Arizona Center for Women, a minimum-security prison in Phoenix, to take telephone reservations. Before the program started, Best Western's regular operators were often overwhelmed by unexpected surges in calls. The prisoner-employees helped ease that problem because they could be summoned to work at a moment's notice.

Today 30 inmates answer phones for anywhere from 20 to 40 hours a week, handling about 5% of all calls to Best Western's toll-free number. They earn \$4.42 an hour, the same starting wage as



Now finishing a three-year sentence for robbery, inmate Rogers takes reservations for TWA

"It gives me an outlet so I don't have to get back into the same bad habits once I get out."

May I help you?" belongs to one of 33 inmates who handle up to 6,500 calls a day. The department's regular entry-level employees receive between \$8.04 and \$9.93 an hour. The Bayview volunteers, many of whom work a full 37½-hour week, pocket 32¢ to 65¢ an hour, the going rate for prison work in the state.

The program has already drawn criticism from labor leaders. Says William McGowan, president of the New York State Civil Service Employees Association: "Rather than hiring appropriate personnel under their own civil service system, the state is employing convicted criminals at slave-labor prices." But state officials say the use of inmates to answer phones frees employees to serve the thousands of people who line up in the agency's offices each day to get driver's licenses and car registrations. Says DMV Commissioner Patricia Adduci: "The challenge in government today is to provide quality service at a minimal cost." The agency intends to hire some of the inmates at standard wages after they leave prison.

the company's regular operators, but the convicts hand over 30% of the money to the prison to pay for room and board. Ronald Evans, Best Western's chief executive officer, calls the program a "resounding success that has solved a legitimate business need for us."

Prisoners find their new jobs valuable not only as a source of income but as a way to develop a skill that could lead to future employment on the outside. Keith Rogers, 21, was convicted of robbery in 1982 and the following year began serving a three-year sentence at the Ventura School in Camarillo, Calif., a correctional institution for youthful offenders. In February he was one of 24 inmates who began taking phone reservations for TWA through a switchboard hooked up to three trailers at Ventura. Says Rogers: "This opportunity makes my future a little bit brighter. It gives me an outlet so I don't have to get back into the same bad habits once I get out."

—By Gordon M. Henry.
Reported by Cristina Garcia/Los Angeles and
Andrea Sachs/New York

Exercise 2: Horse of a Different Stripe

- Objectives:**
1. To alert the reader to the strategy of reading first and last paragraphs as an aid in comprehension.
 2. To alert the reader to the technique of reading topic sentences as an aid to comprehension.
 3. To give the reader practice in hypothesizing about the contents of an article.
 4. To tie together the various strategies of reading comprehension that have been presented in this material.

Teacher: Students may work individually, in pairs or in groups. Record the initial hypotheses on the text's contents as well as the altered hypotheses as students get additional information. Continue the exercise as you did with Exercise 1, according to the 4 different phases. Review the students responses with the class as a whole after each phase has been completed. Make sure the students can justify their conclusions.

Exercise 2-A (Phase 1): Horse of a Different Stripe

- Students:**
1. What information is presented here?
 2. What hypotheses can you make about the content of this article from this information?
 3. What do you know about the topic of the article?



The equine odd couple: Kelly nuzzles her newborn after a history-making delivery

Science

Horse of a Different Stripe

Or, what is that baby zebra doing inside my stall?

—By Jamie Murphy, Reported by
Henry Mayer/Louisville

Exercise 2-B (Phase 2): Horse of a Different Stripe

- Students:**
1. What information has been added to the original article?
 2. What more could you learn about the article from this information?
 3. What can you hypothesize about the text's contents now?
 4. Did your hypotheses change?



The equine odd couple: Kelly nuzzles her newborn after a history-making delivery

Science

Horse of a Different Stripe

Or, what is that baby zebra doing inside my stall?

In Kentucky, the sight of a horse giving birth is nearly as common as bluegrass. But last week when a 26-year-old mare named Kelly rolled over to foal on the clean straw of her specially lit, rubber-padded stall at a farm outside Louisville, the two attending veterinarians monitored the birth with more than customary anticipation. Reason: the newborn animal that later staggered uncertainly to its feet was a zebra.

Veterinarian Foster hopes that last week's successful birth will presage a more secure future for the world's endangered wildlife. Says he: "This procedure could save whole species from extinction." —*By Jamie Murphy. Reported by Henry Mayer/Louisville*

Exercise 2-C (Phase 3): Horse of a Different Stripe

- Students:**
1. What information is presented?
 2. How does the new information change your hypotheses about the text's contents?
 3. Are the sentences "topic sentences"?



The equine odd couple: Kelly nuzzles her newborn after a history-making delivery

Science

Horse of a Different Stripe

Or, what is that baby zebra doing inside my stall?

In Kentucky, the sight of a horse giving birth is nearly as common as bluegrass. But last week when a 26-year-old mare named Kelly rolled over to foal on the clean straw of her specially lit, rubber-padded stall at a farm outside Louisville, the two attending veterinarians monitored the birth with more than customary anticipation. Reason: the newborn animal that later staggered uncertainly to its feet was a zebra.

The colt is the result of the first successful embryo transfer between two different equine species.

The cross-species delivery was the third of its kind.

Embryo transfer among members of the same species is not a zoological novelty.

In the increasingly competitive U.S. cattle industry, top-pedigreed cows are regularly injected with hormones that cause multiple ovulation.

Foster and Bennett believe that similar feats of embryo transfer will enable the zoo to breed rare equine animals with rapidity.

Veterinarian Foster hopes that last week's successful birth will presage a more secure future for the world's endangered wildlife. Says he: "This procedure could save whole species from extinction." —By Jamie Murphy. Reported by Henry Mayer/Louisville

Exercise 2-D (Phase 4): Horse of a Different Stripe

- Students:**
1. Confirm or alter you hypotheses about the contents by scanning the entire article.
 2. Were you able to come to correct hypotheses before reading the entire article?

At what phase?

3. Did the last reading give you new or vital information?
4. Did the introductory and concluding paragraphs and topic sentences give you vital information?



The equine odd couple: Kelly nuzzles her newborn after a history-making delivery

Science

Horse of a Different Stripe

Or, what is that baby zebra doing inside my stall?

In Kentucky, the sight of a horse giving birth is nearly as common as bluegrass. But last week when a 26-year-old mare named Kelly rolled over to foal on the clean straw of her specially lit, rubber-padded stall at a farm outside Louisville, the two attending veterinarians monitored the birth with more than customary anticipation. Reason: the newborn animal that later staggered uncertainly to its feet was a zebra.

The colt is the result of the first successful embryo transfer between two different equine species. A year ago, Veterinarian William R. Foster, who is assistant director of the Louisville Zoo, and Veterinarian Scott D. Bennett of Simpsonville, Ky., synchronized Kelly's reproductive cycle with that of a pregnant Grant's zebra residing at the zoo. Flushing out a ten-day-old embryo from the zebra's uterus with a sterile solution, the two vets implanted it in the womb of the quarter horse. Safely lodged, the embryo gestated for 366 days, slightly longer than the average term for either species.

Foster and Bennett believe that similar feats of embryo transfer will enable the zoo to breed rare equine animals with rapidity. Says Foster: "A zebra's pregnancy normally lasts eleven months. If the embryo is flushed, the female zebra cycles again and can reproduce once more. If we use surrogate recipients, one such zebra can reproduce as many as ten offspring yearly."

Foster deliberately selected an unendangered Grant's zebra (pop. more than 300,000) for his initial experiment. With the newborn's safe arrival last week, how-

ever, the scientists will attempt to repeat the experiment with embryos of such rare types of zebras as Grevy's (pop. 15,000), Hartmann's mountain (7,000) and Cape mountain (200).

The cross-species delivery was the third of its kind. Three years ago at New York City's Bronx Zoo, Flossie, a Holstein dairy cow, gave birth to a gaur (rhymes with tower), a rare type of wild ox that inhabits the forests of South Asia. In 1977 two wild Sardinian sheep were born to a domestic sheep at Utah State University.

Embryo transfer among members of the same species is not a zoological novelty. First accomplished in 1890 with rabbits, the technique has since succeeded in hundreds of different mammalian species, including humans.*

In the increasingly competitive U.S. cattle industry, top-pedigreed cows are regularly injected with hormones that cause multiple ovulation. The embryos are then fertilized artificially and relocated in the uterus of a host mother. Thousands of hybrid calves have been delivered since the process was first used in the early 1970s.

Veterinarian Foster hopes that last week's successful birth will presage a more secure future for the world's endangered wildlife. Says he: "This procedure could save whole species from extinction." —By Jamie Murphy. Reported by Henry Mayer/Louisville

*The first human to be born as the result of embryo transference was delivered last January to a woman in Los Angeles whose name has been withheld to protect her privacy. The baby boy was reported to be healthy.

Exercise 3: Go, Go Jojoba

Teacher: Students can work individually, in pairs or in small groups. Elicit as much of the students' knowledge as possible on the topics hypothesized. Record the students' changing hypotheses with each step of the exercise. Be sure that students have valid reasons for their conclusions. Review their results with the class as a whole.

Exercise 3: Go, Go Jojoba

Students:

Step 1: Look for the key elements (title, sub-title, numbers, geographical locations, et cetera) mentioned in the text. What hypotheses can you make about the text's contents from this information?

What do you know about this topic?

Step 2: Read the introductory and concluding paragraphs. What are your hypotheses now?

Step 3: Read the first sentence of each paragraph. With this new information confirm or alter your hypotheses.

Step 4: Quickly read the entire article. Did you get new information?

Was the last reading of the article necessary to have a correct hypotheses about its contents?

Go, Go, Jojoba

Growers bet on a desert bean

"We know it has a great future," says Desert Agriculturalist Kenneth Foster of the University of Arizona. "We just aren't sure exactly what it is."

The object of Foster's uncertainty is a brown, peanut-size bean called the jojoba (pronounced ho-ho-bah). Nearly a decade ago, researchers found that oil extracted from the beanlike seeds of the jojoba bush, which grows wild in the desert of the Southwestern U.S. and Mexico, could substitute for dwindling supplies of sperm whale oil.

The oil of the endangered sperm whale was used for years in everything from facial cream to transmission fluid. In 1973 interstate sale of the oil was banned in the U.S., but substitutes, including certain fish and vegetable oils, have also been hard to come by.

A group of enterprising ranchers and businessmen is now trying to cash in on the demand for a replacement by cultivating the lowly jojoba plant. Roughly 12,000 acres have so far been turned to jojoba cultivation in Arizona, along with up to 10,000 more in California. The fledgling Jojoba Growers Association of Arizona estimates that potential cultivation could easily reach hundreds of thousands of acres.

The spindly jojoba thrives on the arid conditions of the Southwest. Indians of the region, including the Pima and Papago tribes, once used the bean's oily wax as a hair conditioner to protect against the drying effects of sun and wind.

Since it takes between four and six years for newly planted jojoba to bear seeds in large quantities, no commercially cultivated jojoba oil has yet reached the market. But businessmen are already harvesting and processing the wild bean, and demand is strong. Chief buyers are cosmetics manufacturers, including Max Factor, Estée Lauder and Shiseido, a large Japanese firm. They are using jojoba oil as an ingredient in premium shampoos, moisturizers, sunscreens and conditioners.

With cosmetics demand now far outstripping supply, the price of jojoba oil is soaring. In Mesa, Ariz., Processor Tom Janca sells 55-gal. barrels of jojoba oil for \$6,900, almost triple last year's price of \$2,500 per bbl. Says he: "We're trying to talk the big companies out of ordering too much. We just don't have enough seeds."

Most growers believe jojoba's biggest market will be in industrial applications. Like sperm oil, the bean oil does not break down under high pressures and temperatures, so it is suited for demanding lubrication applications. Pennzoil and Tenneco are among the companies underwriting research on the use of jojoba as a machine lubricant. If that demand picks up, the new business could quickly take root.

TIME, JULY 27, 1981

Exercise 4: Blueprint of a Lost Animal

Teacher: Students can work individually, in pairs or in small groups. Record students' hypotheses and review the results with the class as a whole after each step has been completed.

Exercise 4: Blueprint of a Lost Animal

Students:

Step 1: Focus on the key elements of the text (title, section, illustration, italics, capital letters, numbers, et cetera). Try to form hypotheses about the text's contents. What do you know about this subject?

Step 2: Now read the introductory and concluding paragraphs. Confirm or alter your hypotheses and justify your conclusions.

Step 3: Read the first sentences of each paragraph. Does this information add to or alter your hypotheses?

Were the sentences "topic sentences"?

Step 4: Quickly scan the entire article. Did you acquire new, vital information?

Were your hypotheses correct?

Was the last reading necessary?

Blueprint of a Lost Animal

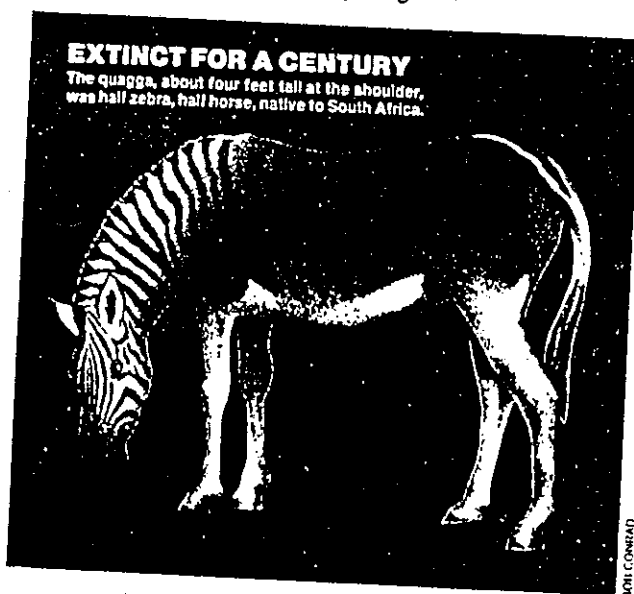
Less than 200 years ago, thousands upon thousands of quaggas roamed the grassy veld of southern Africa. It was *Equus quagga quagga* to be precise, an ungulate the size of a small horse with stripes on the forebody that gave it the look of a half-baked zebra. Early explorers and animal dealers were so impressed by the quagga's sturdy frame that they had some captured and shipped back to Europe to pull carriages. But when the Dutch Boers arrived, they looked at the quagga and saw dinner on the hoof. The new settlers butchered the animals—feeding the meat to their workers and tanning the leather—and by 1878 the quagga was extinct in the wild. Five years later, when the last one died in an Amsterdam zoo, all that was left were some skulls and pelts.

But these remains may turn out to be for the quagga what ashes were for the phoenix. Last week scientists at the University of California at Berkeley announced that they had extracted bits of genes from muscle on one of the pelts and cloned the DNA. The result is a long way from a living quagga, but it is a partial molecular blueprint of one—and proof that genes of extinct creatures can be recovered and studied for clues as to how and from what ancestor a particular species evolved.

Hybrid: The 140-year-old quagga pelt from which the researchers scavenged the DNA had been preserved by salting, a process that did not harm the genes in some still-attached muscle tissue. To extract the genes from this tissue, scientists led by Berkeley's Russell Higuchi dissolved the muscle with an enzyme. They then spliced this quagga DNA into that of a bacteriophage virus, one that easily enters bacteria and lives as a parasite. This recombinant DNA, a hybrid of quagga and viral genes, was then inserted into the common bacteria *E. coli*. The result was the biological equivalent of a copying machine: every time the bacteria reproduced, so did the quagga DNA, thus creating millions of clones of the quagga genes.

To see how quagga genes differed from those of the zebra, the researchers determined the sequence of chemical "letters" in the DNA. Three such letters code for an amino acid, the building block of proteins.

So far the scientists have found about a dozen one-letter differences between quagga and zebra DNA. One goal of such comparisons is to resolve a longstanding controversy: is the quagga more closely related to the horse or to the zebra? So far scientists on each side of the debate have been fighting tooth and bone, citing dental ridges or limb lengths to support their reading of the species. But comparing the quagga's genetic makeup to that of each of its putative relatives should give a less ambiguous answer. Such analysis "may provide a new tool to study the evolutionary links between extinct animals and living ones," says Higuchi.



Allan Wilson, director of the Berkeley lab, hopes to clone genes from a whole menagerie of long-gone creatures. There are dried pelts of extinct cave bears and ground sloths, and remains of the flightless New Zealand moa, which Wilson expects will yield clues to the creatures' evolutionary history. Next into the test tubes, however, will be the DNA of a steppe bison. One of these extinct beasts was found frozen in the Alaska permafrost, which Wilson believes preserved the tissue well enough for analysis. A specimen that has not proved so workable is a 40,000-year-old mammoth frozen in Siberia. In testing bits of its tissue, Wilson found that it had been so heavily contaminated with modern bacteria after it was dug up that the mammoth's DNA was nearly impossible to pick out in usable form.

Unfortunately, the scientists are a long way from reconstructing the animals themselves. "That will be generations—or more—from now," says Wilson. For one thing, such a feat would require all of the

DNA of an animal, not the mere fragments usually found. Furthermore, scientists cannot take even a complete genetic blueprint, such as that from a living animal, and trigger it to reproduce and differentiate into a whole animal. The quagga, the mammoth and the cave bear may be gone forever, but scientists at least are learning that their genes can be revealing mementos of a lost world.

SHARON BEGLEY with SUSAN KATZ

Exercise 5: Polling for Mental Health

Teacher: Students can work individually, in pairs or in small groups. Elicit as much of the students' knowledge as possible on the topics hypothesized. Record the students' changing hypotheses with each step of the exercise. Be sure that students have valid reasons for their conclusions. Review their results with the class as a whole.

Exercise 5: Polling for Mental Health

Students:

Step 1: Focus on the key elements of the text (title, subtitle, chart, text divisions, geographical locations, numbers, et cetera). Try to form hypotheses about the text's contents. What do you know about this subject?

Step 2: Now read the first and last paragraphs. Confirm or alter your hypotheses and justify your conclusions.

Step 3: Read the first sentences of each paragraph. Does the information add to or alter your hypotheses? Support your decision.

Were the sentences "topic sentences"?

Step 4: Quickly read the entire article. Did you receive new information?

Were your hypotheses correct?

Was the last reading necessary?

Polling for Mental Health

A \$15 million study shows that one in five has a disorder

Psychoiatrists have long assumed that depression is the most common mental problem in the U.S. That assumption is wrong, according to a \$15 million six-year survey on psychiatric ailments conducted by the National Institute of Mental Health (NIMH). Anxiety disorders, including phobias, panic disorders and obsessive-compulsive disorders, are the most widespread, say the survey results, afflicting 13.1 million Americans, or 8.3% of adults 18 years of age and over.

The study, by far the largest and most thorough of the 80-odd major surveys to take the psychic pulse of America since 1900, reports that during a given six-month period, one in five adults, or about 29 million people, suffers from mental problems. Only a fifth of those affected had recently sought professional help, mostly from general physicians rather than mental-health specialists.

The NIMH interviewers questioned nearly 10,000 people living in and around Baltimore, St. Louis and New Haven. The responses were fed into computers and checked against criteria for 13 or more mental disorders listed in the American Psychiatric Association's latest *Diagnostic and Statistical Manual of Mental Disorders*. Other sections of the survey, covering 2,500 institutionalized patients and some 6,000 people in Los Angeles and

TROUBLED MINDS

Within a six-month period

Disease	Number affected	% of U.S. adults affected	% who are treated*
Anxiety	13.1 million	8.3%	23%
Alcohol and drug abuse	10.0 million	6.4%	18%
Depression	9.4 million	6.0%	32%
Schizophrenia	1.5 million	1.0%	53%

*Highest rate of treatment

viewed at the three sites had experienced at least one psychiatric problem in their lifetime.

► Rates of disorder were far higher among those under 45. Abuse or dependence on alcohol and other drugs falls sharply after 44. Antisocial personality is a problem of the young, generally low among those over 45.

► College graduates have far fewer ailments than non-college grads.

► For some unknown reason, the phobia rate was extremely high in Baltimore, while alcohol problems were highest in New Haven and St. Louis.

► Only 1% of those surveyed were suffering from some form of schizophrenia, and only half of these cases received professional help.

The finding that one of five

Durham, N.C., are expected to be released next year.

The survey found that women tend to suffer from phobias and depression, while men score significantly higher than women in the abuse of alcohol or dependence on drugs and in long-term antisocial behavior. When all disorders are taken into account, men and women are about equally troubled. Earlier surveys showed that women were more psychiatrically disabled and had more symptoms than men, possibly because women tend to seek help for depression and men tend to hide theirs with alcohol. The current survey found that women seek professional help twice as frequently as men.

Among the other NIMH findings: ► Between 29% and 38% of those inter-

any given time coincides roughly with the conclusions of earlier studies. The Midtown Manhattan study, done in the 1950s, reported that 23% of the population had severe disorders, and up to 80% had some mild level of impairment. The Stirling County study, completed in Nova Scotia in 1952, said that 57% of those interviewed had a disorder during a lifetime and 20% were in need of psychiatric attention at the time of the survey. "The most important thing is not what the overall rate is," says Dr. Darrel Regier, director of the NIMH survey, "but that we now know what the distribution of disorders is. This is establishing a baseline for future research." —By John Leo. Reported by Ruth Mehrtens Galvin/Washington

Exercise 6: Gone, But Not Forgotten (2 pages)

Teacher: Students can work individually, in pairs or in small groups. Elicit as much of the students' knowledge as possible on the topics hypothesized. Record the students' changing hypotheses with each step of the exercise. Be sure that students have valid reasons for their conclusions. Review their results with the class as a whole.

Exercise 6: Gone, But Not Forgotten (2 pages)

Students:

Step 1: Focus on the key elements of the text (title, subtitle, pictures, captions, et cetera). Try to form hypotheses about the texts' contents. What do you know about this topic?

Step 2: Read the "lead". What new information did you get? Confirm or alter your hypotheses and justify your decisions.

Step 3: Now read the first and last paragraphs. Confirm or alter your hypotheses and justify your conclusions.

Step 4: Read the first sentence of each paragraph. Does the information add to or alter your hypotheses? Support your decision.

Were the sentences "topic sentences"?

Step 5: Scan the entire article. Did you acquire new information?

Were your hypotheses correct?

Was the last reading necessary?



Making mola: the hand-stitched panels are a Kuna tradition the volunteers helped preserve



A primitive but idyllic island existence



Two future "kings" of Playón Chico

Gone, but Not Forgotten

In Panama, an ex-Peace Corps volunteer finds a surprising legacy

The goals set by President John F. Kennedy were noble: to create a "peace corps of talented young men and women, willing and able to serve their country." Living like those they had come to help, the volunteers were to bring modern skills to the primitive, the diseased and the ignorant, and to show off America at its best. Twenty-five years after the founding of the Peace Corps, some 6,000 volunteers still labor in 62 nations, but the agency's lofty ideals are tempered by a sense of its limits. Critics, including former volunteers, have questioned whether the corps actually helped or merely provided an exotic interlude for thousands of young Americans. Last month TIME State Department Correspondent Johanna McGeary returned to a remote Kuna Indian village on the island of Playón Chico off the Atlantic coast of Panama, where she lived as a Peace Corps volunteer for 16 months in 1968 and '69. Her report on what the intervening two decades—and the Peace Corps—had wrought there:

I was apprehensive as the bush plane dipped precipitously over the jungle-clad mountain to land. I had first made the same scalp-tingling descent in the dark days of June 1968, leaving behind a

U.S. that seemed to have betrayed its ideals. Without a doubt, I was more passionately opposed to the Viet Nam War than knowledgeable about my work in Playón Chico. Nevertheless, like so many other idealistic but technically untutored volunteers, I was determined in some vague way to do good. Now I was returning to discover if we had.

My work among the Kuna had been fascinating and frustrating, seemingly ill connected to the noble purpose of Peace Corps service. It was a first-rate anthropological experience for me, I concluded, but what was it worth to them? Had our efforts helped improve the lives of the Kuna? I certainly questioned the very



After 17 years McGeary greets an old friend

wisdom or possibility of our "doing good."

Our vegetable project, a benign attempt to improve the Kuna's subsistence diet, had been a complete failure. The Indians didn't want to grow vegetables, refused to tend them, wouldn't eat them. Eventually, a Kuna friend patiently explained why: the vegetables had to be weeded every day, he said. "But here, each morning I decide what I will do. Today I will pick coconuts. Tomorrow I will fish. The next day I will get water or cut bananas. So you see," he concluded, "on my island I am king."

With that I came to believe that Peace Corps volunteers could not impose our particular notions of civilization on other people. The Kuna culture was poor and primitive, yet it had an idyllic quality that was light-years away from the hardscrabble poverty of the campesinos in the Panamanian interior. I had even for a time come to like a life reduced to basic necessity: fetch water, prepare food, wash clothes, catch fish, paddle the boat.

To my delight, I found that the Kuna still do all these things in the old way. Upon my return, the Indians who welcomed me with warm hugs seemed no more surprised than if I had been gone only a few days—perhaps because the years had changed their lives so little. The Kuna still spend half a day paddling to the river on the mainland to bathe, wash clothes, collect water. Intrusions of mod-

ern culture are few: more outboard motors for the wooden cayucos, tape decks and boom boxes everywhere.

Yet inevitably life in the Kuna's San Blas archipelago has subtly changed. Many of the men have left the islands for jobs inland. Tourism and rampant drug smuggling along the coast have transformed the Kuna's former open welcome of Americans into the almost xenophobic suspicion with which they have always regarded Latinos. The number of day trippers, drawn by the Kuna's renowned cloth art, the *mola*, has multiplied.

It was the *mola* that also brought the Peace Corps to San Blas. These vibrantly colored, intricately patterned, hand-stitched cloth panels are essential not only to the Kuna woman's traditional dress but to her life. From her first crude attempts at the difficult reverse appliqué, a Kuna woman will stitch on her *mola* daily, first for her trousseau, then to sell. Yet when the corps arrived in 1963, Indian women were shedding their artful garb for cheap cotton dresses, and it was feared the unique craft of the *mola* would be lost, along with the cash it earned the Indians. The volunteers organized a *Cooperativa de Productos de Mola*. By the time I arrived to organize the eager women on Playón Chico, the co-op had grown to 200 women on seven islands.

I had thought that the cooperative had died when the Peace Corps quit Panama in 1971. Instead, it had blossomed into a cottage industry that brings substantial cash into an economy formerly based on coconuts. Today, 1,365 women on 17 islands turn out thousands of dollars' worth of *mola* products each year, from pillows and purses to the traditional squares. The co-op runs a store in Panama City that sells wholesale to tourist shops in town and even exports to the U.S. Like everything else in the co-op, the store is run by Kuna women only.

The success of the tribe-wide co-op has taught the Kuna how to apply the same principles to even larger matters. Spurred by the construction of a road into their territory and the threat of forced development from outside, the Kuna men have formed a second tribal cooperative to manage the land and water resources of their nearly autonomous homeland. Their efforts have been impressive enough to win international support, including a \$225,000 grant from the MacArthur Foundation. "The Indians have made it into the 20th century intact," says Ann Wenzel, an American friend in Panama. "On the way they have learned to live in contact with the Western world without succumbing to it."

The co-op's success surprised and humbled me. The long-departed Peace Corps hardly brought unalloyed good to the Kuna Indians. But unsuspectingly we had given them the political and organizational skills they needed to control their destiny. It is indeed a useful legacy. ■

Exercise 7: Why Not Accept a Ban?

Teacher: Students can work individually, in pairs or in small groups. Elicit as much of the student's knowledge as possible on the topics hypothesized. Record the students' changing hypotheses with each step of the exercise. Be sure that students have valid reasons for their conclusions. Review their results with the class as a whole.

Exercise 7: Why Not Accept a Ban?

Students:

Step 1: Focus on the key elements of the text (title, picture, caption, names, places, numbers, et cetera). Try to form hypotheses about the text's contents. What do you know about this topic?

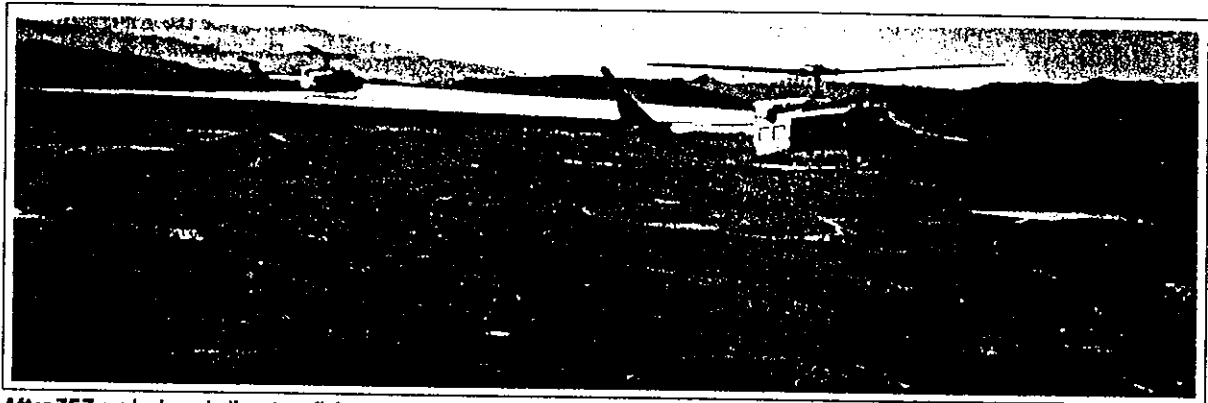
Step 2: Read the first and last paragraphs. Confirm or alter your hypotheses and justify your decisions.

Step 3: Read the first sentence of each paragraph. Does the information add to or alter your hypotheses? Support your conclusions.

Step 4: Scan the entire article. Did you acquire new information?

Were your hypotheses correct?

Was the last reading necessary?



After 757 explosions: helicopters flying over a moonscape of blast craters at the Nevada Test Site

Why Not Accept a Ban?

Ronald Reagan is the only President since the U.S. first developed the Bomb to oppose a comprehensive ban on the testing of atomic weapons. In 1963, two years after the Soviets broke an unofficial 34-month moratorium, John Kennedy sent Diplomat Averell Harriman to Moscow in hopes of securing such a sweeping ban; he returned after twelve days with only the Limited Test Ban Treaty, which forbade explosions in the atmosphere and oceans but not underground. The Nixon Administration in 1974 negotiated the Threshold Test Ban Treaty, limiting underground blasts to no more than 150 kilotons; like SALT II, it was never ratified by the Senate, but is generally accepted by both sides. This week's planned detonation, the 758th at the Nevada Test Site, would be under the threshold, but it clearly reasserts Reagan's resistance to Soviet proposals for a complete test ban.

The President contends that as long as nuclear weapons are needed for deterrence, the U.S. must test them. Because they are highly complicated devices with electrical, mechanical and chemical components that can develop glitches, Reagan argues, that "a limited level of testing assures that our weapons are safe, effective, reliable and survivable."

Secretary of Defense Caspar Weinberger has stressed the country's need to develop increasingly effective warheads and "modernize our tactical nuclear weapons." Testing is also necessary to develop systems like the nuclear-generated X-ray laser, which may prove critical to the President's Strategic Defense Initiative, or Star Wars. In addition, Weinberger's deputy Richard Perle points out that testing more precise warheads has allowed the U.S. to reduce its overall megatonnage by 75% in the past two decades. "That,"

says Perle, "makes for a far safer and more stable world."

Supporters of a ban counter that it would decrease the chances of a pre-emptive nuclear attack by making both arsenals less dependable. "If there are doubts about reliability," explains former Arms Control and Disarmament Agency Director Paul Warnke, "then any tendency toward first strike on *either* side is diminished." In a Council on Foreign Relations study released last week, a group of authors, including President Ford's National Security Adviser Brent Scowcroft and his Defense Secretary James Schlesinger, state that a ban could make "a significant contribution to slowing nuclear proliferation." Proponents also argue that it would be to America's strategic advantage, since the Soviets are behind the U.S. in warhead sophistication. Says Richard Garwin, a nuclear expert with IBM: "Resuming testing will enable the Soviets to further miniaturize their warheads and put even more on their large MIRVed missiles."

While rejecting a total ban, the President has proposed to the Soviets new methods of verifying tests to ensure that both sides are within the limits of current treaties. Last week the CIA announced that it has changed its methods of measuring Soviet tests and conceded that its previous calculations of Soviet violations may have been overstated by as much as 50%.

Agreeing that verification is crucial, proponents of a complete test ban argue that it would be easier to verify than the current threshold ban, because the Soviets have offered on-site inspection for the total test ban. But many in the Administration, led by Perle, maintain that even on-site monitoring offers little promise. "There's no way a few inspectors can police the whole Soviet Union," Perle says. For these hard-liners, the need to stay ahead of Moscow's modernization program is paramount. Concedes Perle: "I'm opposed to a comprehensive test ban even if it were verifiable."

Exercise 8: Bracing for the Fallout

Teacher: Students can work individually, in pairs or in small groups. Elicit as much of the students' knowledge as possible on the topics hypothesized. Record the students' changing hypotheses with each step of the exercise. Be sure that students have solid reasons for their conclusions. Review their results with the class as a whole. (This exercise delves more deeply into intensive reading.)

Exercise 8: Bracing for the Fallout

Students:

Step 1: Focus on the key elements of the text (title, subtitle, picture, captions, places, et cetera). Hypothesize about the text's contents. What do you know about this topic?

Step 2: Read the first and last paragraphs. Confirm or alter your hypotheses and justify your conclusions.

Step 3: Read the first sentences of each paragraph. Does the information add to or alter your hypotheses? Support your conclusions.

Step 4: What connective is used in paragraph 4? Does it contrast, add information, or give an alternative?

In paragraph 6, what is the meaning of "blows" ?
(Use your dictionary if necessary.) Specifically,
what are "these blows" that the article mentions?

Step 5: Scan the entire article. Did you acquire new information?

Were your hypotheses correct?

Was the last reading necessary?

Bracing for the Fallout

The American power industry prepares to face heavy weather



While atomic-energy officials around the world were trying to escape the political fallout from the Chernobyl accident, some of their American colleagues were fearful that the tragedy could doom their industry for years, perhaps even decades, to come. The U.S. industry has long been in deep trouble, and now it has to prepare for new attacks on several fronts.

In Washington, a collection of consumer, environmental and scientific groups known as the Coalition of Environmental/Safe Energy Organizations called for a complete phaseout of nuclear power plants in the U.S. In Pennsylvania, protesters in Lancaster and Dauphin counties vowed to increase efforts to prevent the re-opening of the reactor at Three Mile Island that was not involved in the 1979 accident there. In New Hampshire and on New York's Long Island, antinuclear forces stepped up their campaigns against licensing of the Seabrook and Shoreham plants, arguing that what happened north of Kiev could just as easily happen there. "The accident at Chernobyl makes it clear," said Ellyn Weiss, general counsel of the Cambridge, Mass.-based Union of Concerned Scientists. "Nuclear power is inherently dangerous." Maurice Barbash is a builder who heads a Long Island citizens' group opposed to Shoreham. Last week he was more determined than ever to stop the project. Said he: "I don't see how they could license Shoreham right now. To do so would be madness."

The Chernobyl accident, though, had little immediate effect on American views of nuclear power. For the past several years, network news polls have shown about 60% of the public opposed to building any new plants. Similar surveys taken after the Soviet disaster did not reveal any marked increase in the number of opponents.

Nonetheless, Chernobyl cannot help having an impact on the beleaguered U.S. nuclear industry. Even before the accident at Three Mile Island melted down the credibility of pronuclear organizations, the industry was in trouble. Caught between climbing construction costs, high interest rates and unexpectedly slow growth in the demand for electricity, American utilities stopped ordering new nuclear plants in 1978. After the accident at Three Mile Island, some reactor salesmen tossed away their order books entirely.

But even more problems awaited nuclear energy. In 1983 the Washington Public Power Supply System, or Whoops as it was facetiously labeled after postponing or canceling construction of four of five proposed nuclear plants, sent financial markets spinning by defaulting on \$2.25 billion worth of bonds. In the months that followed, the industry suffered several more body blows as a combination of cost overruns and safety questions forced half a dozen utilities to change their plans on the construction of nuclear plants.



Demonstrators march against a proposed California plant
Future generations could be left sitting in the dark.

These blows left nuclear power moribund, like a patient who needs a respirator in order to survive. Now many fear that the accident at Chernobyl could prove to be the event that pulls the plug. "We're in trouble," conceded Carl Watske, the president of the Bethesda, Md.-based Atomic Industrial Forum, the lobbying group that speaks for the industry. "Before the accident, we could visualize the resumption of orders within about five years. We are still hoping that this will occur, but we expect that there will be some negative effect from a setback like this. If the calls I have received from people in the industry are a good indication, they are all very worried."

There were lessons for the U.S. nuclear industry to learn from the Chernobyl accident. An important one was that authorities must be able to evacuate people living near nuclear plants, quickly moving them out of the path of any radioactive releases. Soviet officials had to clear out four communities with very little warning. It is hard to imagine how people living around some American nuclear facilities, includ-

ing Indian Point, Zion and Limerick, which are located near the major population centers of New York City, Chicago and Philadelphia respectively, could be quickly evacuated.

Opponents of the atom, however, are stretching their point when they suggest that what happened at Chernobyl could just as easily happen in the U.S. There are few comparisons between the way nuclear power is managed in the U.S. and the way it is handled in the Soviet Union. The biggest difference is technological. Only one of the 100 reactors currently licensed by the Nuclear Regulatory Commission to operate commercially in the U.S. is graphite moderated like the one at Chernobyl, and it is cooled by gas rather than water, which makes it substantially safer. One of five reactors operated by the Government for weapons production, the Hanford, Wash., plant, is also graphite moderated. Though water-cooled, it has safety features not present at Chernobyl, the Department of Energy insists.

U.S. facilities are safer than Soviet ones in other ways. Unlike Soviet nuclear reactors, all NRC-licensed American installations are equipped with emergency core-cooling systems. These usually work by dumping tons of water into any reactor core that shows signs of overheating. Nor are U.S. reactors as likely to release radiation into the atmosphere in the event that the fuel starts melting. Only the newest of the Soviet Union's Western-style reactors are equipped with the steel-reinforced concrete containment buildings that are designed to hold in radioactive

gases and the other by-products of an accident. All licensed U.S. reactors but one are encased in such structures. The exception, the graphite-moderated plant in Platteville, Colo., features a built-in containment system.

An equally important difference between the American and the Soviet nuclear programs is political. The U.S. industry operates in an open society, subject to laws that give the public considerable say over where nuclear plants are located and some input as to when and even if they will go into operation. The same cannot be said of the Soviet Union, where the government makes all such decisions without consulting the public.

Nuclear power currently supplies 16% of the electricity used in the U.S. In years to come, as oil and coal reserves run out, it will probably be called upon to provide even more. Critics of nuclear power may take some satisfaction in halting its expansion, but their success today could leave future generations sitting in the dark.

—By Peter Stoler

TEXTS IN PART IV

1. Gordon M. Henry, "Inside Job," Time, 12 May 1986, p. 78.
2. Jamie Murphy, "Horse of a Different Stripe," Time, 28 May 1984, p. 53.
3. "Go, Go Jojoba," Time, 27 July 1981, p. 58.
4. Sharon Begley and Susan Katz, "Blueprint of a Lost Animal," Newsweek, 18 June 1984, p. 44.
5. John Leo, "Polling for Mental Health," Time, 15 October 1984, p. 56.
6. Lance Morrow, "Gone, But Not Forgotten," Time, 14 April 1986, pp. 28-31.
7. "Why Not Accept a Ban?," Time, 14 April 1986, p. 24.
8. Peter Stoler, "Bracing For the Fallout," Time, 12 May 1986, p. 59

BIBLIOGRAPHY

BIBLIOGRAPHY

Adams, M. J. and Bruce, B. "Background Knowledge and Reading Comprehension." Reading Education Report #13. Urbana: Center for the Study of Reading, 1980.

Bettelheim, Bruno and Zelan, Karen. On Learning to Read. New York: Alfred A. Knopf, 1982.

Carrell, P.L. "Schema Theory and ESL Reading: Classroom Implications and Applications." Modern Language Journal. 68, No. 4 1984, pp. 332-343.

Carrell, P.L. "Three Components of Background Knowledge in Reading Comprehension." Language Learning. 33, No. 2 1983, pp. 183-207.

Christophersen, Paul. Second Language Learning: Myth and Reality. London: Penguin Education, 1973.

Elley, W. B. and Mangubhai, F. "The Impact of Reading on Second Language Learning." Reading Research Quarterly, 19, No. 1 1983, pp. 33-67.

Freire, Paulo. Pedagogy of the Oppressed. New York: Seabury Press, 1968.

Goodman, K.S. "Do You Have to: Be Smart to Read? Read to be Smart?" Education Digest. 41, 1975, pp. 41-44.

Goodman, K.S. "Reading: A Psycholinguistic Guessing Game." Theoretical Models and Processes of Reading. Ed. Singer and Ruddell. Newark, Delaware: International Reading Association, 1976, pp. 497-508.

Grellet, Francoise. Developing Reading Skills. Cambridge: Cambridge University Press, 1981.

Harris, David P. Testing English as a Second Language. New York: McGraw-Hill, 1963.

Holms, B. C. "The Effect of Four Different Modes of Reading on Comprehension." Reading Research Quarterly, Fall, 1985, pp. 575-585.

Holt, John. How Children Learn New York: Delacourt Press, 1983.

Horning, A. S. "On Defining Redundancy in Language: Case Notes." Journal of Reading, 22, No. 1 1973, pp. 312-332.

Hosenfeld, C., et al. "Second Language Reading: A Curricular Sequence for Teaching Reading Strategies." Foreign Language Annals, 14, 1981, pp. 414-423.

Hudson, Thom. "The Effects of Induced Schemata on the 'Short Circuit' in L-2 Reading: Non-Decoding Factors in L-2 Reading Performance." Language Learning. 32, No. 1 1982, pp. 1-31.

Ilyin, D. and Targardh, T. "Classroom Practices in Adult ESL." TESOL, 12, 1978, pp. 164-171.

Kavale, K. and Schreiner, R. "The Reading Process of Above Average and Average Readers: A Comparison of the Use of Reasoning Strategies in Responding to Standardized Comprehension Measures." Reading Research Quarterly. 15, No. 1 1979, pp. 102-128.

Kohl, Herbert. Open Classroom. New York: New York Review, 1969.

Kohl, Herbert. Reading, How To. New York: E.P. Dutton and Co., 1973.

Krashen, S. D. "Aptitude and Attitude in Relation to Second Language Acquisition and Learning." Individual Differences and Universals in Language Learning Aptitude. Ed. K. C. Diller. Rowley: Newbury House, 1981, pp. 155-175.

Krashen, S. D. and Terrell, T. D. The Natural Approach. Oxford: Pergamon, 1983.

Langer, J. A. "From Theory to Practice: A Pre-Reading Plan." Journal of Reading. 25, No. 2 1981, pp. 152-156.

Laufer-Dvorkin, B. "Intensive vs. Extensive Reading for Improving University Students' Comprehension in English as a Foreign Language." Journal of Reading, 25, No. 1 1981, pp. 40-43.

Leedy, Paul D. Reading Improvement for Adults. New York: McGraw-Hill, 1956.

Lindin, M. and Wittrock, M. C. "The Teaching of Reading Comprehension According to the Model of Generative Learning." Reading Research Quarterly. 18, No. 1 1981, pp. 44-57.

Marcetti, A. J. "Individualized Reading: Current Programs in Secondary Schools." Journal of Reading. 22, No. 1 1978, pp. 50-54.

Monteith, M. K. "Schemata: An Approach to Understanding Reading Comprehension." Journal of Reading. 22, No. 1 1979, pp. 368-371.

Obah, T. V. "Prior Knowledge and the Quest for New Knowledge: Third World Dilemma." Journal of Reading. 27, No. 2 1983, pp. 129-133.

Ortiz, R. K. "Generating Interesting Reading." Journal of Reading. 27, No. 2 1983, pp. 113-119.

Paulston, B., et al. Teaching English as a Second Language Techniques and Procedures. Cambridge: Winthrop, 1976.

Pigott, M. B. "Who's Afraid of the Wicked Witch? Reading for College Students." Journal of Reading. 23, No. 6 1980, pp. 534-538

Postman, N. and Weingartner, C. Teaching as a Subversive Activity. New York: Delacourt Press, 1969.

Richgels, D.J. "Schema Theory, Linguistic Theory and Representations of Reading Composition." Journal of Educational Research. 76, No. 1 1982, pp.54.62.

Rogers, Carol. Freedom to Learn. Columbus: Charles E. Merrill Publishing Co., 1969.

Schulz, R. A. "From Word to Meaning: Foreign Language Reading Instruction After the Elementary Course." Modern Language Journal, 67, No. 2 1983, pp. 127-135.

Smith, Frank. Reading. Cambridge: Cambridge University Press, 1978.

Smith, Frank. Understanding Reading. New York: Holt, Reinhart & Winston, 1971.

Smith, S. C. "Learning Strategies for Mature College Learners". Journal of Reading. 26, No. 1 1982, pp. 76-81.

Steffersen, M. S., et al. "A Cross-Cultural Perspective on Reading Comprehension." Reading Research Quarterly. 15, No. 1 1979, pp. 10-29.

Sweiger, Lewis J. "Directed Discovery Learning in the Content Area." Journal of Reading. 22, No. 8 1979, pp. 99-113.

Tovey, D. R. "Inseparable: Language and Content Instruction." Journal of Reading. 22, No. 8 1979, pp. 720-725.

Van Parreren, C. F. and Schouten-Van Parreren, M. C., "Contextual Guessing: A Trainable Reader Strategy." System. 9, No. 3 1981, pp. 235-241.

Walcutt, Charles C., ed. Tomorrow's Illiterates. New York: Atlantic, Little, Brown, 1961.

Wildman, D. M. and Kling, M. "Semantic, Syntactic and Spacial Anticipation in Reading." Reading Research Quarterly. 14, No. 2 1978-79, pp. 128-164.

